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JAMAICA: The Impact and Effectiveness of the
PL 480 Title I Program

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A.I.D. Project Impact Evaluation Report No. 51

by

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FOREWORD

In October 1979, the Administrator of the Agency for International Development (AID) initiated an Agency-wide ex-post evaluation system focusing on the impact of AID-funded projects. These impact evaluations are concentrated in particular substantive areas as determined by AID's most senior executives. The evaluations are to be performed largely by AID personnel and to result in a series of studies which, by virtue of their comparability in scope, will ensure cumulative findings of use to the Agency and the larger development community. This study, "Jamaica: The Impact and Effectiveness of the PL 480 Title I Program," was conducted in January 1982 as part of this effort. A final evaluation report will summarize and analyze the results of all the studies in this sector and relate them to program, policy, and design requirements.

PREFACE

PL 480 Title I represents the largest program administered by the Agency for International Development (AID). In FY 1982, it allocated over \$600 million. It provides concessionary financial assistance to 25 countries for the purchase of food grains and other agricultural commodities. In order to improve its operation, the Administrator, Mr. McPherson, directed the Bureau for Program and Policy Coordination, Office of Evaluation, Studies Division, to conduct a series of country-specific impact evaluation studies.

Since assistance under PL 480 Title I is generally not in the form of projects, as in the case of roads, irrigation, or agricultural services, the evaluation methodology employed differed from the many other impact evaluation studies conducted to date. By virtue of the program's main economic focus, the evaluation highlights macroeconomic issues such as the impact on balance of payments support, agricultural price policy and related incentives or disincentives to food production, and income distribution effects. In addition, where information was available, the impact of the program on dietary patterns and nutrition or health status was investigated. Where specific self-help agreements are identified, the evaluation teams have reviewed the available evidence on target population impact. Finally, where certain foreign policy objectives are attained through this program, they are highlighted.

This report on Jamaica represents one of a series of country PL 480 Title I studies. The report on Sri Lanka has already been published, two other studies will be available soon on Egypt and Peru, and it is envisioned that three additional country studies will complete the review, with a synthesis paper to conclude the series in 1984.

The Studies Division of the Office of Evaluation, Bureau for Program and Policy Coordination, wishes to extend a special thanks to U.S. Department of Agriculture staff members for their cooperation and participation in the PL 480 Impact Evaluation Series.

Richard N. Blue
Associate Assistant Administrator
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Coordination

INTRODUCTION

This evaluation of the PL 480 Title I program in Jamaica was the first in a series of impact evaluations of Title I projects. An evaluation team was assembled in late 1981 and included an AID macroeconomist, a PL 480 program planner from the Department of Agriculture, a representative of AID's Bureau for Program and Policy Coordination, and a consultant with experience in public health systems and familiarity with the issues of feeding programs. The team leader was Director of Program, Policy, and Evaluation for AID's Bureau for Food for Peace and Voluntary Assistance. The team met for the equivalent of one day in Washington and spent the period January 5-22, 1982 in Jamaica, doing field work and drafting parts of this report.

The team thanks Ms. Grace Simons in the USAID Mission for her cooperation and assistance and her useful insights into the PL 480 program. Ms. Simons and others made appointments for team members to see Jamaican Government ministry personnel as well as officials of importing and food processing organizations; this was very helpful and saved the team much time. The USAID Mission was not able to provide administrative or logistical support, and we tried to avoid imposing on Mission personnel.

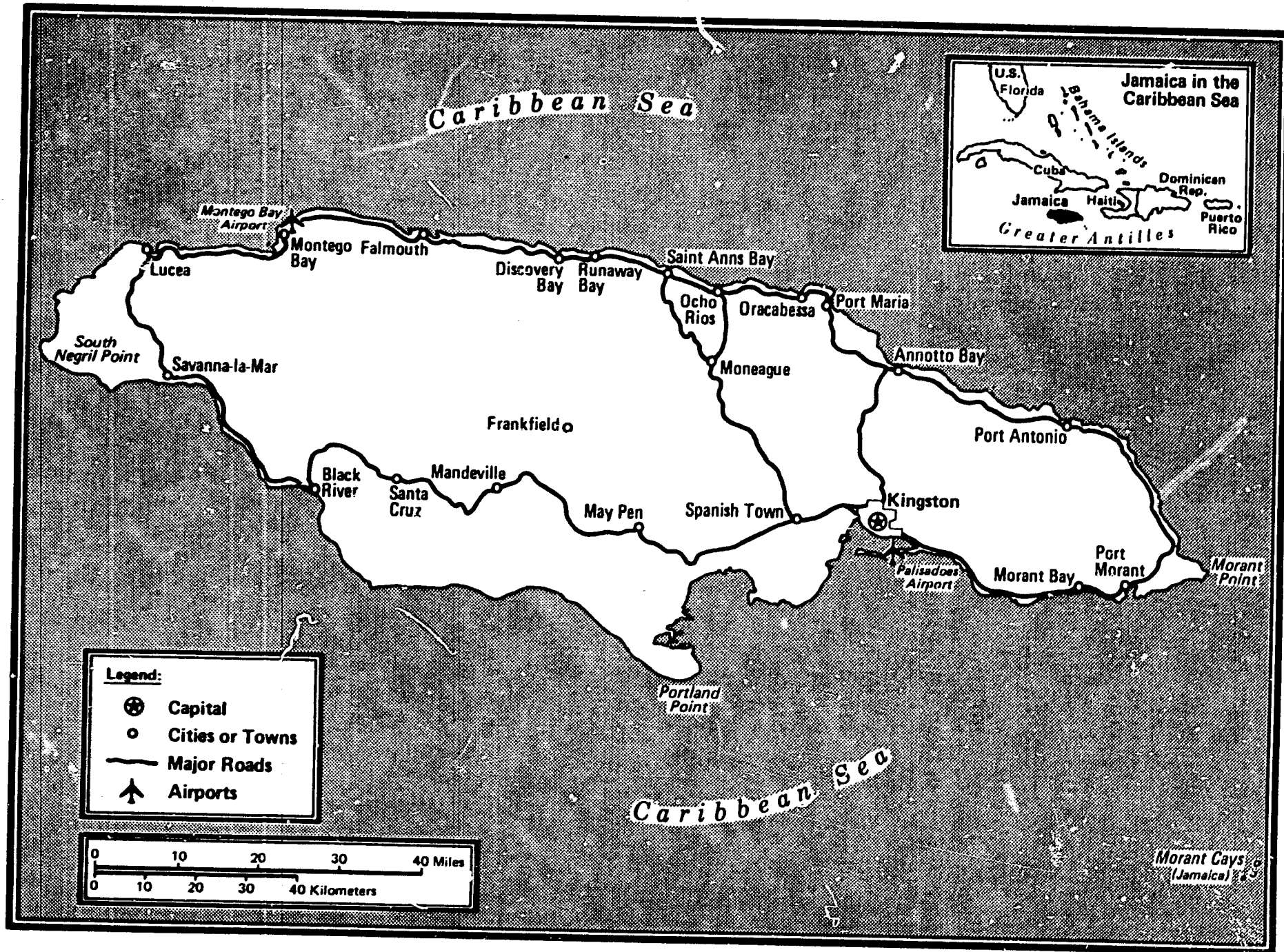
We would also like to thank the many Jamaicans, in Kingston and throughout Jamaica, who gave so freely of their time and so frankly of their opinions. To mention a few would be to ignore the many. Rather, it may be said that virtually all the Jamaicans interviewed during the course of the team's visit (see Appendix L) were exceptionally helpful and cooperative and clearly are dedicated to improving the lot of their countrymen.

GLOSSARY

- AMC** Agricultural Marketing Corporation. A Government of Jamaica entity established under the Manley Government to operate food buying stations and retail outlets as an alternative to domestic marketing by individuals (higglers). The AMC was abandoned as a domestic marketing structure by the Seaga Government in late 1980.
- CCC** Commodity Credit Corporation. The U.S. Department of Agriculture's financing arm for all domestic and export commodity programs. The CCC provides the concessional financing for all PL 480 Title I export sales.
- CDF** Caribbean Development Facility.
- CFS** Child Feeding Services. The Government of Jamaica entity responsible for manual repackaging of and transportation of maternal and child health and school feeding program commodities to rural warehouses and health clinics.
- CFO** Central Foods Organization. The Government of Jamaica entity responsible for handling and storage of the PL 480 Title I blended and fortified foods for the various Government feeding programs.
- CUP** Currency Use Payment. Authorizes a portion of PL 480 Title I agreement payments to be repaid in recipient country's local currency for use in that country by the U.S. Embassy.
- EEC** European Economic Community.
- ESF** Economic Support Funds.
- GOJ** Government of Jamaica.
- JCTC** Jamaica Commodity Trading Company (see JNH).
- JNH** Jamaica Nutrition Holdings, Ltd. The Jamaica State trading corporation established in 1974. It was responsible for all food imports, including PL 480 Title I commodities, until 1981, when it was reorganized as the Jamaica Commodity Trading Company (JCTC).
- MCH** Maternal and Child Health.
- MOA** Ministry of Agriculture.
- MOE** Ministry of Education.

- MOH** Ministry of Health.
- NFPB** National Family Planning Board of the Government of Jamaica.
- NPC** Nutrition Products Center. Formerly the Government of Jamaica-financed kitchen facility providing lunches for distribution under the school feeding program in the Kingston, St. Andrew Corporate area. Its duties were later assumed by Nutrition Products, Ltd. (NPL).
- PAMCO** Project Analysis and Monitoring Company. The Government of Jamaica entity responsible for the review and coordination of the feeding programs after 1979 (formerly the Project Development and Review Division of the Ministry of Finance).
- SF** School Feeding program.
- UMR** Usual Marketing Requirement. Average annual volume of commercial import purchases during the previous five years for commodities supplied under Title I. Included in agreements to ensure that Title I sales do not displace U.S. commercial export sales or unduly disrupt world prices of commodities and normal patterns of commercial trade.

Jamaica



SUMMARY

PL 480 Title I programs are poorly understood, more complicated than other development assistance activities, and often designed to serve purposes that are outside the usual analytical framework of aid practitioners. Thus, to evaluate the program, it is necessary to identify its principal objectives (Title I program documentation is not always the best guide) as well as those elements of the program on which the evaluation should focus, such as the relative importance of macroeconomic impacts or specific self-help measures contained in the agreements. It is also necessary to select a representative program period for evaluation. (Title I programs have been in effect in Jamaica since 1974.)

The period 1975-1980 was chosen for examination in Jamaica. This was a period in which the Title I program expanded, as did other aspects of U.S. assistance to Jamaica, in response to worsening political and economic conditions. The year 1981 was not included, since the impact of events in that year, including the programs and policies of the new Government elected in late 1980 and the impact of the 1981 Title I agreement of \$17.1 million, could not be satisfactorily assessed at the time of the evaluation in January 1982.

The Title I program, which averaged roughly \$10 million in the years 1977-1980, was part of a larger U.S. effort to ameliorate worsening economic conditions in Jamaica, where the economy had begun to slide in the early 1970s. The rationale behind increased economic assistance to Jamaica, as well as to the smaller nations in the Caribbean, was that the aid (1) would be a clear demonstration of the friendship and support of the United States and (2) would contribute to economic stability, adjustment, and growth. Both these objectives would in turn serve to weaken Fidel Castro's appeal to Caribbean leaders, particularly Michael Manley of Jamaica.

Notwithstanding increased aid flows from the United States directly to Jamaica through development assistance loans and grants, Economic Support Funds (ESF), and PL 480 concessional financing, as well as indirect aid through the Caribbean Development Facility and substantial aid from other donors, Jamaica's economy continued to move downward, and its Prime Minister apparently moved toward the political left. In the period 1976 to 1980, Gross Domestic Product (GDP) fell 14 percent, the unemployment rate rose from 22 to 27 percent, and the structure of production remained excessively dependent on imports, without significant improvements in the capacity to export. Relations with the Manley Government remained strained although there were "bright spots" that helped to sustain support for foreign aid to Jamaica (e.g., Jamaica's support of the United States on Iran and Afghanistan in the United Nations).

The causes of the continued economic slide were the same as those that had led to its inception: excessive and ineffective Government intervention in the economy and other economic policy failures; adverse movements in international commodity prices; capital flight; and reluctance of foreign investment (and to a lesser extent, tourists) to enter a country whose politics were uncertain, where labor unrest was notable and costs were high, and where crime was a prominent part of everyday life.

PL 480 Title I food aid, averaging U.S.\$10 million a year in the period 1977-1980, was itself too insignificant and fungible a resource to have any discernible impact on the Jamaican economy. Annual imports in 1979, for example, were \$1 billion and U.S. food aid was only about 1 percent of that amount. At the same time, food aid was part of a larger U.S. assistance response, which in turn was a significant element in a multidonor effort to support stabilization and adjustment in Jamaica by providing foreign exchange. The issue, thus, was the general effectiveness with which this foreign exchange was utilized by Jamaica. For the reasons cited above, the foreign assistance effort at best helped alleviate the symptoms of economic crisis (at a considerable cost in terms of increased foreign debt) but did not effectively contribute to a constructive resolution of the crisis. The Jamaican economy was no more able to meet its foreign exchange needs on its own in 1980 than it was in 1976.

With respect to more specific economic effects on food production and supply, it is unlikely that the concessional food imports were additional to what Jamaica would have imported without that aid. The Government of Jamaica's (GOJ) pattern of economic management in the period suggests that, while there were severe restrictions on imports, a minimum level of total food requirements was determined, and food imports required to meet this level would be brought in, whether concessionally financed or not. Insofar as PL 480 did not augment imports of food, the issue of direct disincentive effects of food aid (i.e., those exclusively attributable to PL 480) on overall domestic food production does not arise.

PL 480 may have affected the composition of imports, resulting in an altered pattern of incentives that might positively affect some crops and negatively affect others. Because PL 480 was thought mainly to have had balance of payments effects, and because overall food import policy (as described below) provided greatly enhanced incentives to domestic food production, no detailed study was made of the compositional effects of imports and their possible impact on the pattern of domestic production.

Jamaican food import policy after 1975 provided a strong stimulus to domestic food production. Food imports were reduced by 54 percent in real terms between the early and late 1970s. At the same time, the annual increase of agricultural crops for domestic use rose from .5 percent in the early period to 5 percent in the later period. Production and distribution were carried out mainly by the private sector and were largely unregulated. This case provides a compelling example of the positive incentive effect of reduced food imports on domestic food production.

Accordingly, food aid was associated with an overall food import policy that stimulated domestic production and thus avoided having an indirect disincentive impact as well.

The self-help measures in the 1975-1980 Title I agreements covered a number of sectors (agriculture, health, housing, education, and nutrition) and were expressed in terms which inhibited reliable assessment of accomplishments. The measures were secondary to (though some were supportive of) the principal politico-economic purposes of the assistance. They enabled the GOJ and USAID to agree on where local currencies generated under the agreements should go; thus, they reflected the AID loan and grant portfolio to a large extent, as well as the development priorities of the GOJ. While the GOJ dutifully submitted annual reports listing steps taken to carry out the self-help measures, these generally were compilations of project progress reports (including but not limited to those funded by AID). While they did not appear to be used as a basis for future determinations of PL 480 levels, they did serve as a basis for future self-help measures, since these reappeared year after year with little or no textual change.

The self-help measures of the PL 480 agreements in the period 1975-1980 did little if anything to contribute to development in Jamaica. Formally, of course, they did stipulate counterpart uses supportive of development projects. Monitoring these self-help projects, however, was not seen as a serious matter either in Kingston or in Washington.

The agreement on counterpart allocations did have an interesting side effect, however. A Ministry of Finance spokesman said that he was able to press line ministries to meet their implementation responsibilities under AID projects because it was important not to allow the funds generated by sales of PL 480 commodities to languish in the account into which they were deposited. Further, the counterpart gave additional assurance that the GOJ financial obligations towards AID projects would be met in timely fashion. (Other donors were encountering difficulties of this nature; the Caribbean Development Facility [CDF] was intended to resolve this problem.)

The Jamaica Title I program must be understood as representative of how Title I food aid was employed in a highly charged economic and political environment during the past decade. That is, the decision to allocate Title I aid to Jamaica had important political underpinnings. The aid's stabilization and adjustment objectives were paramount, and more traditional longer term development objectives were not of major interest.

Further, there was only limited development of markets for U.S. commodities associated with this program. This was due in part to the fact that corn was the principal import and the U.S. already was the exclusive supplier. Also, other countries' objections (Guyana and other CARICOM countries) to additional U.S. rice, wheat, and wheat flour exports to Jamaica prevented market development for these commodities.

Future Title I agreements should be more "coherent" than those in Jamaica in 1975-1980. That is, where the problem is clearly definable in terms of economic stabilization and adjustment, the self-help measures and perhaps local currency allocations as well should be closely linked to those terms and not seek to address an unduly broad range of important, but less immediately relevant, development challenges. In these situations, the most important "self-help" measures are the economic policies implemented by the Government to promote stabilization and adjustment in the economy. Whether the amounts of food aid are large or small, the effectiveness of each dollar of food aid will depend crucially on the efficacy of these policies.

Where, however, a Title I program is not based on a structural balance of payments crisis, but is to serve more as a vehicle for contributing to longer term well-being and growth, then there should be a presumption that the self-help measures and the local currency used--indeed, the entire agreement--will be directed toward achieving progress in the recipient country's food sector. In short, there is no one model for a PL 480 Title I program. Jamaica's program appears to have been based on an attempt to blend two models.

The feeding-program components of the Title I program (a heritage from the time when only Title II aid was provided to Jamaica) for the period 1975-1980 were poorly designed and administered (with the possible exception of the urban school feeding program). Also, the USAID Mission did not adequately attend to them, in part because the program lacked the separate identity that Title II programs enjoy; they were instead minor components of a large Title I activity. The team found no evidence that the feeding program, which was not closely monitored or studied over time, had any discernible effect on school attendance, performance in school, or even on nutrition.

We recommend phasing out support for these while encouraging the GOJ to assume increasing responsibility for them. This phase-out process could be accomplished in two stages: Jamaica could first use the counterpart funds that have been generated and then, eventually, it could use its own budgetary resources to purchase local foodstuffs.

I. BACKGROUND

A. Origins of Evaluation

In late 1980, the Agency for International Development (AID) began to consider the advisability of adding evaluations of PL 480 Title I programs to the list of the program and subject areas undergoing impact evaluations. The decision to initiate a series of impact evaluations in this area was based on the size of the Title I program (roughly equal to the size of the development assistance program); the significant potential impacts that Title I programs could have on such objectives as economic development, U.S. market development, and hunger alleviation; and the increased emphasis AID was already placing on the development objectives of PL 480.

The examination of the Title I program in Jamaica was the first in a series, and its aim was to provide an opportunity to develop a methodology that could be used in the future to evaluate other Title I programs. It was recognized that the special characteristics of food aid required their own methodology because the methodologies employed to evaluate such activities as rural roads or small-scale irrigation projects were inappropriate.

B. PL 480 Title I

Familiarity with the nature and operations of PL 480 Title I programs is important for a complete understanding of program impact. (Appendix C describes PL 480 Titles I, II, and III and provides additional information, particularly on Title I, for readers unfamiliar with these programs.)

In brief, a Title I program authorizes the sale of U.S. agricultural commodities on concessional terms to "friendly" developing countries. The concessional nature of Title I financial terms includes extended repayment periods (up to 40 years) and low interest rates (2 or 3 percent). In some cases, Title I agreements may require an initial payment (generally 5 percent of total agreement financing) to be made by the recipient country at the time of delivery of commodities at a U.S. port. Similarly, a currency use payment (CUP) may also be required in some agreements. This authorizes a portion of the agreement to be repaid in the recipient country's local currency for use in that country by the U.S. Embassy.

Title I agreements specify the level of financing to be provided, as well as the commodities to be purchased and their

estimated tonnages. Exact tonnages will depend on market prices at the time of purchase. The agreement will also specify a "usual marketing requirement" (UMR) for each commodity to be supplied. UMRs represent the average annual volume of commercial import purchases during the previous five years and are included in the agreement to ensure that Title I sales do not displace U.S. commercial export sales or unduly disrupt world prices of commodities and normal patterns of commercial trade. By design, Title I assistance is to be "additional" to the level of commercial imports which the recipient country would normally purchase.

Commodities imported through Title I are generally sold on the local market by the recipient country government; the currencies generated by these sales are then available for use by the government. These currencies may be allocated to support "self-help" development measures specified in the Title I agreement or for general budgetary support in selected sectors which have also been specified in the agreement. The self-help measures which are required as part of all Title I agreements are steps which the recipient government agrees to undertake in order to qualify for the assistance. These measures may be directed toward a variety of activities, including agricultural and rural development, nutrition, and population planning. An annual report detailing progress in implementing the self-help measures is also required by the Title I agreements.

In contrast to Title I concessional sales, the PL 480 Title II program provides for donations of U.S. food commodities. In many cases the commodities are targeted to specific, nutritionally vulnerable groups, with distribution through maternal and child health (MCH) activities, school feeding programs, and Food-for-Work projects. Frequently, these projects are administered by private U.S. voluntary agencies.

II. PROGRAM SETTING

A. Physical Characteristics

Jamaica, the third largest island in the Caribbean and the largest of the English-speaking islands, has a total area of 4,244 square miles. A mountain ridge, rising to over 7,000 feet at its highest point, divides the island into northern and southern coastal areas, but almost half of Jamaica's land area is over 1,000 feet above sea level. Jamaica's tropical climate is an asset, providing excellent conditions for both agriculture and tourism. The island is dominated by a single, large urban center, the Kingston metropolitan area, which contains more than 25 percent of Jamaica's 2.2 million population.

B. Political Setting

In 1972, Michael Manley was elected Prime Minister of Jamaica. His election at the head of the People's National Party (PNP) marked the first time that the more conservative Jamaica Labour Party (JLP) had been out of power since the island attained independence in 1962. The PNP, espousing a political philosophy it called "Democratic Socialism," believed that the Government should take a significantly more activist role in the national economy, including equity and management participation in economic enterprises.

Manley himself was a charismatic figure who, perhaps influenced by dependency theorists, shared their belief that reliance on the developed nations and the influence of multinational corporations was a constraint to long-term economic growth and development. Following its election in 1972, therefore, the Manley Government undertook a series of measures including a production levy on bauxite and the nationalization of various firms. At the same time, Manley increasingly became a spokesman for the Third World and greatly increased Jamaica's official and unofficial contacts with Cuba.

As a result of these developments, relations between Jamaica and the United States deteriorated; they were not improved by Manley's increasingly radical rhetoric as Jamaica's economy worsened. In 1977, however, there began a period of ascendancy by the more moderate faction of the PNP because of the failure of the party's radical faction to produce a viable solution to Jamaica's mounting problems. As a result, during this period Jamaica began discussions on a stabilization plan with the International Monetary Fund (IMF) and other donors. It was at that point that the U.S. Government, wishing both to cooperate with international efforts to support recovery of Jamaica's economy and to encourage what it perceived as a moderating trend within the PNP, decided to increase the size of its bilateral assistance package.

C. Economic Setting

The crisis situation that had developed by the mid-1970s can be attributed to internal and external factors, both short term and medium term. By the early 1970s, the Jamaican economy had developed along extremely dualistic patterns that resulted in a relatively high degree of income inequality, unsatisfactory employment performance, and a structure of production that was excessively dependent on imports. The underlying causes included a variety of factors that diminished the role of market forces in the economy. These included policies that

discouraged agricultural production (including subsidized food imports, adverse movements in the rural/urban terms of trade, and a low share of agriculture in total investment); a system of trade and industrial incentives that encouraged a highly import- and capital-intensive structure of production and led to a manufacturing sector in which enterprises were sheltered from both domestic and foreign competition; and an increasingly militant organized labor movement which resulted in artificially high labor costs in the formal sectors of the economy and mitigated against employment expansion. Despite the adverse effects of these factors on growth, employment, and income distribution, the extent of basic needs satisfaction was relatively high (compared with countries at similar income levels) because of Government programs in health, education, and nutrition.

The Government that was elected to power in 1972 had placed great priority on employment and income distribution and chose to address these problems through increased public intervention and control of the economy, thus further reducing the role of market forces. This was manifested in a sharply expanded role for public enterprises in production and distribution, steep increases in public employment and Government expenditures, intervention in labor markets resulting in high minimum wages and a strengthened role for unions, and increased restrictions and controls on imports.

At the same time, a variety of other factors also contributed to a mounting structural imbalance between the supply of and demand for foreign exchange. First, direct foreign investment, which had financed the current account deficit in the early 1970s, dropped off as major projects in tourism and mining were completed. Second, import prices of fuels and raw materials increased sharply. Export prices also rose significantly as a result of the bauxite levy imposed by the Government and favorable movements in agricultural commodity prices. However, export volumes declined sharply, reflecting declining world demand and the effects of the bauxite levy. Third, tourism receipts fell, the result of the 1974 recession in developed countries and diminished internal security. Fourth, as direct foreign investment declined, the Government borrowed heavily abroad on nonconcessional terms, resulting in increased debt service requirements and diminished creditworthiness by the mid-1970s.

By 1976, foreign exchange, upon which the structure of production still depended heavily, had become extremely scarce. The deficit for goods and nonfactor services was on the order of \$250 million (roughly 10 percent of GDP) in both 1975 and 1976. Because of mounting outflows of investment income, including interest payments abroad, the current account deficits in these two years were around \$310 million. Real GDP fell by 6 percent from 1975 to 1976.

During the first half of 1977, the Government undertook a number of measures to address the crisis, including wage guidelines and restrictions, increased restrictions on imports, devaluation, and measures to improve public finances. These measures led to a two-year standby agreement with the IMF. However, slippages under the agreed upon program led to an interruption of the agreement by the end of 1977 and negotiation of a three-year Extended Fund Facility (EFF) agreement by May 1978. The policy measures on which this agreement was based included measures to promote output and growth (through better functioning of public enterprises and the import-licensing system, encouragement of domestic and foreign private investment, incentives to exporters, etc.); restrictions on the growth of wages and improved regulation of prices; improved fiscal and monetary performance; and devaluation. More generally, the measures focused on improvements (rather than reductions) in public participation in the economy.

The EFF agreement was reviewed in May 1979. By all accounts the IMF was fully satisfied with GOJ performance and agreed to double its contribution during the second and third years, to approximately \$170 million per year, because of uncontrollable external events, including the effects of the large increase in oil prices, that had adversely affected the economy. (However, by the end of 1979, the agreement was suspended. See Section IV-D., below.)

D. The AID Program Setting

During the mid-1970s, the AID program in Jamaica was modest. In FY 1975, for example, total economic assistance (development assistance, PL 480, and Peace Corps/other activities) totaled \$4.3 million. Similarly, in the 15-month period of FY 1976 and the transitional quarter, U.S. assistance was \$5.1 million. Thus, immediately prior to the beginning of large-scale U.S. economic assistance, the AID program was a relatively minor portion of the foreign assistance resources Jamaica was receiving. The bulk of the U.S. assistance during this time, furthermore, was divided almost equally between PL 480 Title II and the Peace Corps/other category; development assistance was a minor element of the program, totaling \$600,000 in FY 1975 and \$900,000 in FY 1976 and the transitional quarter.

Following a major review in 1977 of conditions in Jamaica, and based on recommendations that assistance be substantially increased in order to alleviate the balance of payments crisis and reverse economic decline, the President approved a total aid level of \$62 million for FYs 1977 and 1978, of which PL 480 was to be \$22 million.

III. THE FOOD AID PROGRAM: DESCRIPTION AND PURPOSES

A. Goals

In the period FY 1977-1980, food aid was one component of a U.S. assistance program that was premised on the objective of promoting economic recovery in Jamaica as the first step towards sustainable growth and development. The initial assistance package which was approved for FY 1977-1978 therefore, consisted of quick-disbursing PL 480 Title I (\$22 million), Housing Investment Guaranties (\$15 million), and Security Supporting Assistance (\$10 million). The balance of this initial package was made up of \$15 million in development assistance loans to address longer term problems in the Jamaican economy.

Although the composition of the program that was actually implemented in FY 1977-1978 and subsequent years varied to some extent from the approved package, the intent of the mix was maintained. That is, the bulk of the assistance was to be rapidly disbursing and targeted at alleviating Jamaica's foreign exchange crisis on a sustainable basis.

At the same time, USAID/Jamaica sought to address the longer term problems of the stagnant agricultural sector, severe unemployment, and overpopulation through development assistance-funded projects. The bulk of the Mission's efforts during this period, therefore, was directed at the agriculture sector, although there was also involvement in the health, population planning, and education sectors.

B. Program Description

PL 480 Title I assistance began in Jamaica in FY 1974 when an agreement was signed with the GOJ authorizing the sale on concessional terms of \$800,000 of blended and fortified foods. These commodities were distributed through school feeding and maternal and child health programs administered by the Jamaican Government. Since 1967, the United States had been supplying these foods for use in the feeding programs through Title II donations.

Although the Title II program initially involved a voluntary agency as an intermediary, by 1973 the program was Government-to-Government. In 1973, in view of the relatively high per capita income of Jamaica, the grant program was shifted to a Title I concessional sales program. Thus, in 1974, 1975, and 1976, the United States provided small volumes of commodities (principally blended foods) to Jamaica under

highly concessional financing terms (Title I), and the Government of Jamaica distributed the food through health clinics and as part of school feeding programs.

In FY 1977, the character of the Title I program changed markedly. The level of Title I programming grew to \$12.0 million as one element of a larger package of U.S. development assistance. And while blended and fortified foods continued to be included in the Title I program, bulk commodities were added, to be resold by the GOJ on the local market. Thus, the program in Jamaica came to reflect the more traditional character of Title I programs. Agreements and/or amendments of \$10.0 million followed annually in FY 1978 through FY 1980.

The financial terms of the early Title I agreements provided dollar credit, 18-year repayment, 3-percent interest, and required a 5-percent initial payment. Adjustments to these terms were also made in the FY 1977 agreement with the goal of easing the repayment obligation in the near term, when it was believed that Jamaica's financial difficulties would be most severe. The agreements of 1977 through 1980 provided convertible local currency credit, 12-year repayment with 3 years grace, 3-percent interest, and no initial payment.

During the period covered by this evaluation, 328,200 metric tons of commodities valued at \$43.6 million were shipped to Jamaica. Corn made up the bulk of the shipments, representing 80 percent of total volume (263,000 metric tons) and 65 percent of total value (\$28.2 million). Wheat and wheat flour shipments were 10 percent of total tonnage (33,400 metric tons) valued at \$5.7 million, while vegetable oil represented 1 percent of tonnage (4,900 metric tons) valued at \$2.9 million. Blended and fortified foods made up 8 percent of total tonnage (26,900 metric tons) valued at \$6.8 million.

The importation of Title I commodities into Jamaica has been the responsibility of Jamaica Nutrition Holdings, Ltd. (JNH), a state trading corporation (reorganized in 1981 as the Jamaica Commodity Trading Company, Ltd.). Procedures for handling Title I imports do not appear to have differed markedly from those followed for commercial purchases of like commodities. JNH factored in Title I shipments with the scheduling of all other imports for which it was responsible.

An exception to standard import procedures, however, was the handling of receipts for Title I commodities. Following their sale to either Jamaican processors or wholesalers, JNH was responsible for depositing the local currency generations into the Title I account at the Bank of Jamaica. Disbursements were made from this account, on order of the Ministry of Finance, to projects and programs agreed upon by the Government of Jamaica and AID in or pursuant to the Title I agreement.

Another exception to the regular commercial import procedures followed by JNH occurred in shipping arrangements, which had to be altered for Title I imports based on the U.S. Cargo Preference Act and its requirement that 50 percent of all Title I commodities be shipped on privately owned U.S. flag vessels. This requirement presented difficulties for JNH, primarily because many U.S. flag vessels are larger than those used in Jamaica's commercial importing and cannot be easily accommodated at all Jamaican ports. This situation reduced JNH's flexibility in its importing operations and, in some instances, resulted in large accumulations of demurrage charges for JNH. Large shipments of corn were particularly problematic as they had to be unloaded at Port Esquivel, a bauxite loading port, where ships receiving bauxite have priority at berth. In cases where the discharge of corn was delayed, demurrage charges resulted. In one case a demurrage charge of \$125,295 of Title I freight was documented.

The importation of Title I commodities was also plagued by the limited availability of storage facilities. Limited storage does not have to be a problem, provided the Title I agreement is signed early in the fiscal year so commodity shipments can be scheduled to arrive at appropriate intervals. However, in the case of Jamaica, agreements made prior to 1980 tended to be signed late in the year. As a result, commodities had to be scheduled for shipment over a relatively short period of time, leading to either an overburdening of Jamaica's storage facilities or the need for extensions of the terminal shipping dates through amendments to the agreements. Beginning with the FY 1980 agreement, these problems have been avoided to a considerable degree as the agreements have been signed earlier in the fiscal year.

Following their arrival in Jamaica, the Title I commodities (with the exception of the blended and fortified foods) were sold by JNH to various Jamaican companies which were responsible for further processing and marketing throughout the island. Distribution of the commodities or their products was not targeted through direct feeding programs or other means at any particular income or consumer group. Rather, the Title I commodities were comingled with all similar goods and marketed through normal retail channels. In this manner the commodities were subject to the GOJ's system of subsidies and price controls, designed to keep foods affordable for all income groups.

Likewise, no distinction was made with respect to the geographical distribution of the commodities. Given the relatively small size of the island, distribution and retailing of the commodities in the rural areas do not appear to have been a critical problem.

The commodities financed by Title I were comingled with other, larger commercial imports and were not in this sense traceable. Further, they did not appear to have had much effect on overall levels of food imports. Jamaica was and is by no means self-sufficient in food production and has significant import needs. But Jamaica's policies on levels and pricing of food imports apparently had strong disincentive effects during the first half of the 1970s. During the second half, food imports were cut back significantly, by over 55 percent in real terms, and there was a strong production response. Imports financed by Title I were delivered in the context of sharp overall reductions in food imports to levels that aroused considerable civic unrest. It is doubtful that food imports would have been cut back very much further had PL 480 shipments been unavailable.

The blended and fortified foods included in the Title I agreements for use in the MCH and school feeding programs were handled separately from the bulk commodities. GOJ ministries responsible for the programs' administration submitted annual budget requests for their programs to the Ministry of Finance, where the Project Development and Review Division (reorganized in 1979 as the Project Analysis and Monitoring Company--PAMCO) established how much of the blended and fortified foods would be requested for the respective feeding programs. The Division also advised JNH on matters pertaining to commodity selection and purchasing, and prepared project proposals on the program for submission to USAID/Jamaica. In general, the type and volume of commodities for the feeding programs were determined by historical approvals, with no growth taking place during this period. Commodity selection reflected "conventional" wisdom about the desirability of fortified products, even though there were indicators that the principal nutritional problem in Jamaica concerned caloric rather than protein deficiencies.

The importing and handling of the blended and fortified foods suffered from a number of administrative and operational problems which impaired their most effective use. One of these was a lack of coordination between JNH and the Central Foods Organization (CFO), the GOJ agency responsible for handling and storage of these foods. As a result, the blended and fortified foods at times arrived in Jamaica without advance notice to CFO.

A more critical problem resulted from late signings of the Title I agreements, which created an urgency to import the commodities in a shorter period of time than was preferred. This in turn created pressure in Jamaica to distribute commodities through the feeding programs faster than would normally be the case. Distribution tended to be heavy following receipt of the commodities, with supplies being exhausted before the next

shipment was received from the United States. Soy-fortified foods in particular are subject to spoilage and to rodent and insect infestation during prolonged storage periods and therefore create their own pressure for quick disbursement. Improved scheduling of blended and fortified food imports and more regulated distribution of them in the feeding programs are both needed.

C. The Self-Help Measures and the Use of Local Currency Generations

Prior to the Title I agreement of FY 1978, signed at a time when local currency generations from the initial FY 1977 food sales were becoming available, the scope of the self-help measures attached to the U.S. food aid program was limited. During the period FY 1975-1977, five practically identical measures were found in all the agreements. Three covered the forestry, family planning, and nutrition sectors in which USAID/Jamaica was involved. The other two dealt with Government of Jamaica efforts to increase domestic production of food crops and the need for improved storage and handling of food commodities.

With the inception of the expanded PL 480 program, however, the number of self-help measures contained in the FY 1978-1980 agreements increased dramatically. Some of these self-help measures reflected provisions contained in individual Mission project agreements; others were used to pre-leverage conditions necessary for the initiation of new Mission projects; yet others reflected general development objectives, most common being that of increased production of domestic food crops. A common feature of all the self-help measures from FY 1975 to FY 1980, however, is that they were stated in general terms that were not easily quantifiable or measurable. Thus, it was difficult to determine actual progress made in meeting the requirements of these measures.

The increase in the number of self-help measures in FY 1978 paralleled the increased availability of local currency generations from the sale of PL 480 commodities. In an effort to program these resources (and, not incidentally, to maintain accountability), USAID/Jamaica and the GOJ signed a Memorandum of Understanding in March 1978 on the uses of local currency generations.

At bottom, the purpose of this Memorandum was to ensure that adequate amounts of counterpart funding were available to AID projects at a time when other donor projects were experiencing slow disbursement rates and delays in implementation. The Memorandum, therefore, gave priority in the allocation of

local currency generations to support (1) ongoing AID projects, (2) activities which would facilitate programs being considered for AID assistance, (3) activities complementing such ongoing or proposed programs, and (4) other high-priority development projects for Jamaica.

In general, this Memorandum of Understanding fulfilled the purposes for which it was intended: to ensure that AID and other important projects received the full amount of counterpart funding required. This not only contributed to progress in completing the projects, but also helped overcome delays in disbursements of foreign exchange by donors. Part of this foreign exchange--the portion that covered local costs--helped alleviate the overall problem of foreign exchange scarcity. As the Memorandum was implemented, category 4 above was funded primarily by contributions to the operating expenses of AID-counterpart agencies within the Government of Jamaica.

Such generalized success, however, cannot be claimed for the self-help measures. Their development was not, at the time of the evaluation, an important or major endeavor. In fact, the line ministries and agencies that were expected to take action to meet the requirements of the measures were rarely directly involved in developing, or agreeing to, the final list of measures. Most, if not all, of these ministries and agencies, therefore, were not initially aware of the existence or purpose of the self-help measures. Thus, it is highly unlikely that the self-help measures had any influence on the development efforts of the Government during this period--except to the extent that they "authorized" the timely flow of counterpart funds to AID and other donor projects.

D. Design and Review of the Program

The study team extensively reviewed documentation submitted by the country team in Jamaica to support the GOJ's annual request for Title I assistance, and it studied the Washington interagency review and approval process. Both of these efforts were undertaken to ascertain whether the impact of Title I assistance was affected by either of these two program factors. (See Appendix D for a more detailed examination of these processes.)

In general, the country team provided Washington with only a minimum amount of analysis of the underlying need for and effects of the Title I program when a more thorough analysis was clearly called for. This may have been due to the fact that the country team believed the balance of payments and foreign policy justification for the program were so obvious and compelling that extensive justification and analysis were

not required. Alternatively, it may have been the result of a low priority given to the effort or a lack of staff expertise available at the time to undertake such a thorough review and analysis.

Information submitted by the country team for the Bellmon determination is illustrative of the quality of information flowing to Washington. It was argued that the Title I commodities would not have a significant disincentive impact on agricultural production and marketing in Jamaica since the commodities were either not grown locally or constituted only a small portion of total domestic supply and consumption. The impact of the imported commodities on the production and marketing of locally grown substitutes was not addressed, nor was the long-term impact of food assistance and food imports on Jamaica's agricultural development considered. Yet, developments in Jamaica's food production during this period suggest that these factors were important.

In the Washington interagency review process, foreign policy and economic stabilization objectives of the program were the primary considerations for deciding on the annual Title I requests for assistance. This was particularly true beginning with the FY 1977 program. Considerably less concern was shown for the humanitarian, nutritional, and longer term development objectives of the program. In part, this reflected the issues highlighted in the country team's annual submission, but it also reflected the highly charged foreign policy context in which program decisions were being made. Longer term development concerns were considered to a degree, but generally only to the extent that they contributed to overriding foreign policy goals and were enhanced by the economic recovery program being implemented.

Market development objectives were not a major concern in either design or review of the Title I program. This was primarily due to the fact that corn shipments were the bulk of the commodities supplied to Jamaica through the program and the United States was the exclusive supplier of this market. At best, Title I shipments of corn provided an opportunity to maintain a market during the period of Jamaica's balance of payments difficulties. Following recovery, it could be argued that the GOJ and JNH might be predisposed to expand commercial purchases of corn as well as other commodities from the United States.

Arguments in the interagency review process concerning the usual marketing requirements for corn for the FY 1978 agreement demonstrate the degree to which commercial market and other program considerations were overshadowed by foreign policy and economic recovery arguments. They also highlight the sometimes conflicting goals of Title I programs in specific country situations.

The Department of Agriculture opposed any programming of corn in the 1978 agreement, arguing that no gap existed between the projected consumption level and the volume of required commercial corn imports established in the UMR. Also, given Jamaica's balance of payments difficulties and the probability that the corn UMR would not be achieved in 1978, USDA was legitimately concerned that Title I corn shipments would merely supplant commercial purchases. In the end, however, arguments in favor of the programming of corn based on foreign policy and economic recovery considerations prevailed. The corn UMR was lowered from 115,000 to 50,000 metric tons, thereby increasing the gap between commercial purchases and projected consumption and allowing corn to be programmed under Title I.

IV. THE IMPACT OF THE PROGRAM

A. General Impacts

Several impacts of the PL 480 Title I program in Jamaica were possible at different levels. Not all of the following potential impacts were examined, but they give an overview of the kinds of impact this program can be expected to have.

The financial transfer which the concessional sales represented, together with other resource transfers, could have had a macro-economic impact, by alleviating balance of payments difficulties. The imported food could have had direct impacts on the agricultural sector, by affecting incentives to producers, consumer prices, consumption patterns (both among commodities and among groups of consumers), and the nutritional levels of the Jamaican people. Further, the self-help measures could have affected matters in the several sectors they addressed--perhaps making additional developmental contributions. Too, the local currency allocations, assuring the use of funds for special activities, could have increased the likelihood of success of these activities and also avoided the possibly less effective use of country resources by the GOJ. More indirect impacts could have involved the particular GOJ uses of the foreign exchange "freed" by the concessional terms of the food aid; conceivably we could have encouraged the GOJ in its specific uses of at least a volume of foreign exchange equivalent to the grant element of our food aid program.

Because the aid was prompted by important political challenges, one could examine how it served U.S. foreign policy objectives or, at least, how well it served to stave off even more serious challenges.

The evaluation examined some of these questions more completely than others, and, given the time, data, and personnel constraints, some not at all. Appendix B on evaluation methodology outlines the choices made by the team, and the costs and benefits of these choices to the evaluation.

B. Economic Impacts

The first issue in evaluating the economic impact of Title I is the question of fungibility or additionality--did the assistance provide additional food to Jamaica, or did it help finance imports of food which would have taken place in any event and, therefore, contribute essentially to foreign exchange? The evidence suggests that PL 480 contributed mainly to foreign exchange availability. First, the data on aggregate food imports indicate significant reductions in real terms during the period in question (see Table 1). In constant prices, food imports averaged \$145 million during 1970-1975, but only \$60 million during 1977-1980, a decline of about 60 percent. These reductions generated considerable civil and political unrest, and it is doubtful that further significant reductions (say in the absence of Title I) would have been politically feasible. Second, food imports represented only about 7 percent of total imports (in current prices) during the 1977-1980 period. Given that foreign exchange for imports was severely constrained and tightly budgeted by an intragovernmental committee in charge of allocating foreign exchange to various competing uses, it is most likely that changes in the level of PL 480 would have been broadly distributed over the foreign exchange budget, rather than being concentrated on the food portion of the budget or any other single small component of total imports. Conversations with public officials involved in the foreign exchange rationing process tended to confirm this view.

Under these circumstances, the economic impact of PL 480 can only be analyzed in terms of its contribution to foreign exchange availability in Jamaica. The levels of PL 480 (about \$10 to \$12 million per year) were of a relatively small order of magnitude compared with total imports. At the same time, PL 480 was an integral part of a larger U.S. assistance response, which in turn was a significant factor in a multidonor

response to Jamaica's economic crisis. The impact issue is whether the foreign exchange from PL 480 and other sources was used effectively to promote economic recovery on a sustainable basis. In current parlance, did the foreign assistance (and the economic policy package which it supported) effectively promote structural adjustment?

Table 1. Aggregate Food Imports, 1970/1973 to 1980
(millions of U.S.\$)

	1970-73 Average	1974	1975	1976	1977	1978	1979	1980
Food Imports (constant 1974 \$)	155.4	122.1	127.7	83.0	59.0	76.1	51.3	50.0
Food Imports (current \$)	81.3	122.1	129.9	88.0	53.6	76.1	65.7	72.3
Total Merchandise (current \$)	548.8	935.9	1123.2	912.8	746.8	864.7	1002.8	1172.6

Source: Appendix H.

The bulk of the overall foreign assistance response, as well as the major policy reforms, occurred in 1978 and continued through 1979 until the suspension of the IMF agreement in late 1979. A formal analysis of structural adjustment during these years indicates that there was negative structural adjustment; the balance between sources and uses of foreign exchange actually deteriorated in real terms, as GDP fell slightly while domestic demand rose slightly. More generally, the trends for the 1975-1980 period as a whole--the steady declines in manufacturing and export crop production, the positive performance of food production, the sharp increase in government services, etc.--were broadly characteristic of the 1978-1979 period as well.

An important proximate cause of the weak impact of foreign assistance in promoting structural adjustment was the import-rationing system, which functioned very poorly according to most accounts because of inherent limits on information and conflicting priorities. A second important factor was the fundamental bias towards inefficient import substitution because of restrictions on competing imports, which remained basically intact during this period. In this context, the potential effectiveness of devaluation was severely handicapped. The actual effectiveness was further reduced by the inability of the Government to contain inflation and prevent sharp increases in prices and to a lesser extent, wages, thereby in some measure nullifying the effect of the devaluation on relative prices. More generally, the problem of public intervention in the economy was not resolved.

The sizable assistance flows in 1978 and 1979 did not effectively promote structural adjustment and economic recovery for the reasons mentioned above. However, foreign aid flows do appear to have played an important role in temporarily shoring up both domestic demand and GDP in real terms. In 1976, 1977, and 1980 domestic demand (consumption plus investment) fell by 10, 12, and 13 percent, respectively, while the declines in GDP were on the order of 6, 2, and 6 percent. For 1978 and 1979, domestic demand increased slightly (about 1 percent per year), and GDP fell slightly. But this brief stabilization came at a high cost in terms of increased foreign debt and future claims on foreign exchange. External public debt rose from about \$650 million at the end of 1975, to \$900 million at the end of 1977, and to almost \$1,250 million at the end of 1980.

C. Food, Agriculture, and Nutrition Impacts

Food imports can entail an undue disincentive to domestic production of food by providing food that is marketed domestically at artificially low prices. (See Appendixes D and H for detail supporting this discussion.) A direct disincentive impact can be attributed to PL 480 if PL 480 augments the supply of imported food marketed at artificially low prices. In Jamaica, the level of food imports was essentially independent of PL 480; that is, PL 480 did not affect the supply of imported food. Further, the arrangements for marketing imported food were such that the price at which this food was marketed did not depend on the role of PL 480 in financing food imports. Thus, these findings indicate that there were no direct disincentive impacts of PL 480 through effects on the total quantity of food imports.

While overall food imports were not augmented by PL 480, a question could nevertheless be raised concerning the effects of

changes in the pattern of incentives on individual crop production. For example, there were increased corn imports, and domestic corn production fell in the late 1970s. The causal relationship in this case is unlikely, however, since corn acreage remained about the same. Thus the decline in domestic production resulted from a fall in yields presumably associated with vagaries of the weather, or lack of inputs. Even where a fall in a domestic crop can be causally related to an increase in imports of that crop, the question remains, given overall stability in food imports generally, what domestic crop received a stimulus to increased production? Because our judgment is that PL 480 had mainly balance of payments effects, and because overall food import policy provided a sharp stimulus to domestic agriculture in general, no study was made of the compositional effects of imports and their possible impact on the pattern of domestic production.

A distinct (and arguably more important) disincentive issue is the question of the disincentive effects associated with Jamaica's overall food import policy. If this policy was one that entailed disincentives to domestic food production, and if a portion of food imports was financed by PL 480, then disincentive impacts can be attributed to PL 480 by virtue of its role in supporting Jamaica's overall food import policy.

The evidence indicates that there was no such "indirect" disincentive impact associated with PL 480 Title I during the period under review. Food import policy after 1975 provided a strong positive stimulus to domestic food production. Measured in constant prices, food imports dropped from an annual average of \$140 million during 1971-1975 to \$64 million during 1976-1980. This sharp reduction in food imports led to a significant improvement in domestic food production. The trend rate of growth in "domestic" agriculture (as opposed to export crops) rose from .5 percent per year over the 1971-1975 period to 5 percent per year over the 1976-1980 period.

This case provides a compelling example of the positive incentive effects of reduced food imports. It is noteworthy that domestic food production and the distribution of this food were mainly carried out by the private sector in Jamaica and were largely unregulated, in sharp contrast to export agriculture which was strictly regulated during that period. Second, it is important to note that the level of food imports had significant effects on incentives to domestic food production in Jamaica during the 1970s, even though the commodity composition of food imports was quite different from the composition of domestic production.

In appraising food policy and the apparent success in substituting domestic for imported food, two important issues have to be examined: (1) the possibility of tradeoff between export

crop production and food crop production, and (2) the overall effect on consumption and nutrition of changes in the level and composition of the food supply during this period.

With respect to the first issue, if gains in food production inevitably led to declines in export crop production, then the net effect of reductions in food imports or foreign exchange availability might have been unfavorable. However, export crop production declined at a trend rate of 5.6 percent during the first half of the 1970s, compared with a slower trend rate of decline of 3.8 percent during the second half of the 1970s. This improvement in the rate of decline suggests that increased food production did not occur at the expense of export crop production. Most accounts of the decline in export crops emphasize natural factors, poor policies, and mismanagement, in both production and distribution, and none points to a necessary tradeoff. More generally, both land and labor are widely underutilized in Jamaica, and yields in export crop production are low in comparison with both earlier years and other countries. There is evidence (see Appendix H) that producer prices for food rose more rapidly than producer prices for export crops and that this contributed to the poor performance of export crop production. However, absolute increases in producer prices for export crops were restricted by marketing boards. Accordingly, the shift in relative prices in favor of food crops was not a necessary result of the sharp reductions in food imports and the associated stimulus to domestic food prices.

With respect to the issue of nutritional impact, reliable data are scant. However, an as yet unreleased study of the consumption effects of agricultural policies found some improvement in nutritional status between 1970 and 1978. While the latter year was an exceptionally good one for domestic food production, this finding is nonetheless impressive, especially in view of the decline of about 16 percent in real per capita GDP between 1970 and 1978. Indeed, this suggests that the income distributional effects of increased reliance on domestic food production (and diminished reliance on imports) may have been quite positive.

D. Political Impacts

By providing financial assistance to Jamaica, particularly of a quick-disbursing nature, the United States sought to shore up its relations with Prime Minister Manley--both through a visible show of support and, equally important, by promoting economic recovery on a sustaining basis. The focus of this effort was short term, given the growing severity of the deficits and the need for foreign exchange. It was believed that

continued economic decline in Jamaica would lead to greater threats of radicalism and that the East-West drama would be played out in Jamaica and in other Caribbean islands as well, to our obvious disadvantage.

The economic policy reforms and the associated assistance response slowed the declining trend in GDP but did not lead to sustainable economic recovery. The structural balance of payments problems were not resolved. By 1979, relations with Manley had deteriorated. His clear drift toward the political left led the United States to take a position against new initiatives in support of the Jamaican Government and economy and to simply maintain the status quo.

Manley himself appears to have been directed by his own party (the PNP) more than he led it. The more radical wing of the party assumed control in 1979, and in September of that year Manley gave a speech in which he clearly tilted toward Cuba and the Eastern Bloc. At about the same time, the IMF Extended Fund Facility agreement was also suspended due to the GOJ's failure to meet performance criteria.

Although the United States had determined not to move forward with new measures of support to Jamaica (the proposed Schweiker amendment, which would have called for a detailed audit of the Jamaica program, encouraged this policy), a decision was made not to suspend the PL 480 program. This decision not to provide new assistance to Jamaica while at the same time maintaining the existing food aid program was designed to constitute the appropriate balanced signal of U.S. intentions to Jamaica.

In any event, in early 1980 Manley announced that elections would take place later that year. This gave some hope to the United States that relations with Jamaica could improve should Manley lose, while providing some justification for a continuation of the PL 480 program in February 1980.

Throughout the latter part of the 1970s, U.S. expectations and aspirations with respect to its relations with Jamaica were not high. The personality of Manley was such that, regardless of the efforts and assumptions of the administration and prominent officials in it, stable and friendly relations could not be confidently anticipated. However, U.S. assistance efforts were not wholly without significance. It has been argued that by 1980 the economic situation had deteriorated to such an extent that U.S. aid, together with that of other donors, was an important factor in shoring up the economy sufficiently enough to permit elections to take place. This, of course, led to the political demise of Manley, to a new Government friendly to the United States, and thus to new opportunities for improved relationships.

E. Impacts of the Self-Help Measures and the Counterpart Allocations

The self-help measures of the PL 480 agreements in the period 1975-1980 did little if anything to contribute to development in Jamaica (see Appendix F). To the extent that they reflected continued concern for areas which were the subject of AID loans and grants, they facilitated local currency flows to those projects and thus provided some additional "guaranty" of support. However, given that line ministries were not involved in the design and formulation of self-help measures but were involved only in after-the-fact collection of data for final reports, it would be difficult to say that they were spurred on to greater achievements by these measures.

Annual self-help reports were duly submitted by the Ministry of Finance, the GOJ agency responsible for their production. These reports, however, were essentially a collection of progress reports submitted by line ministries on all activities related to the intent of the self-help measures. General in nature, the reports did not focus on a clear evaluation of the GOJ's response to the self-help measures.

In some instances, omission in the reports of specific subjects seemed to imply that no action had been taken to comply with one or more of the self-help measures. At the same time, both the Mission's and Washington's reviews of these reports appear to have been perfunctory, so it is unlikely that these reports had any influence (either for or against) on decisions affecting the course or content of the food assistance program. In fact, a plausible inference of the apparent lack of interest in the reports is that the self-help measures on which they reported made little additional contribution to the conduct of the Jamaican development effort.

F. Impacts of the Feeding Programs

1. School Feeding Programs

The GOJ operated two school feeding programs; one was in the Kingston metropolitan area, and the other, a rural school feeding program, was spread throughout the rest of the island. The programs differed in character and efficiency. The urban program provided each participating student with a small quantity of milk and, beginning in 1980, a bun made with wheat flour. While these items were not nutritionally insignificant (they provide 10 grams of protein and 400 kilocalories each), they do not constitute a full meal but are essentially a snack.

The team had the impression (see Appendixes I and J) that the supplies of the milk and buns to the urban schools were fairly regular. Their precise impact on nutrition was not possible to discern, although a 1977-1978 study suggested that school feeding appeared to have a positive impact on consumption patterns and nutritional status when first introduced in a school--an impact which then dissipated over time. Apparently, a good number of school children passed up the opportunity to buy the bun, which cost 5 cents. (From 1976 to 1980, the program had distributed soy flour, meat-and-bulgur-filled patties at no charge to participants.) The impact on school attendance could not be discerned, because no comparative data were available. It follows that impact on performance in school could not be determined.

The rural school program was characterized by an uncertain supply of the commodities provided under Title I and by the European Economic Community (EEC). These commodities were a supplement to the hot lunches provided at rural schools, and were intended to supply one-third of the minimum daily requirements of protein and calories. Because of severe problems of storage and distribution in rural areas, it was difficult for schools to rely on this element of their feeding program. In fact, a more important element of the rural feeding programs involved purchase of food on the local market from funds provided by the Ministry of Education and from proceeds from the sale of school lunches to the children (these cost 30 to 50 cents). The Title I commodities served as a nutritional supplement to the lunches and provided bulk to the children's diets.

A school feeding program has been in effect in Jamaica since the 1920s, and the Jamaican people have come to see such a program as an entitlement. Questions of impact on attendance or nutrition were of secondary relevance to them. While the impression of some Jamaicans was that attendance fell when school lunches were not provided, this was not documented. Indeed, a study team visit to a rural school which was in the second week of a term during which school lunches were not being provided (due to a failure of EEC commodities to arrive in Jamaica on time) revealed that no drop in attendance had accompanied the absence of the feeding program.

Some Jamaican observers allege that some children eat little before coming to school in the morning and, in the absence of a lunch program, will go through an entire school day hungry. Studies have concluded that over time this will affect their attention spans, how they learn, and how much they learn. Accordingly, for some children, the feeding program can be assumed to bear a relationship to academic performance. But for how many children? What is the impact of the food supplement on attendance and performance? No one interviewed during

the course of the evaluation knew the answers to these questions, nor were any studies available which had addressed them adequately.

2. Maternal and Child Health (MCH) Feeding Program

The MCH program, like the rural school feeding program, is characterized by unreliable supplies, inability to effectively target the supplement and ensure it is consumed by those in need, and a lack of reliable impact data. In the distribution centers, health workers interviewed reported that they rarely know when food will arrive or how much will be coming. When food does arrive, it must be distributed fairly quickly since many distribution centers have severe storage problems. Jamaican respondents state that the food supplement distributed for the benefit of a malnourished child is in most cases likely to be consumed by all members of the family, and thus is not likely to have any significant impact on malnourished children.

In consequence, health officials do not rely on the feeding program to achieve health or nutritional gains--either by the direct use of a food supplement or by using the food as an "incentive" to get mothers to attend health clinics and benefit from the services provided there. The officials discourage reliance on the food as an incentive, and appear to base their health services program on a continuing educational process, i.e., on continuing efforts to persuade parents of the value of health services and sound nutrition.

3. Monitoring Feeding Programs

The feeding programs make up only a small part of the food aid program in Jamaica. The Mission does not closely monitor the efficiency or effectiveness of the feeding programs. Despite their small nature, we believe that there is an obligation on the part of the Mission to monitor these programs, since the United States is providing the commodities directly to these programs. However, the programs are not a priority for USAID and might unduly tax the resources of Mission personnel. Accordingly, it may be more appropriate for the school feeding program, at least, to take its place as one of the several beneficiaries of counterpart allocations under Title I agreements. That is, rather than provide commodities directly to the feeding programs, the PL 480 agreements could include an equivalent amount of commodities for commercial sale by the GOJ and provide an allocation of the local currencies generated by the sale to the line ministries charged with food distribution programs. Commodities could be purchased by the ministries on

the open market. This would provide a contribution to the Jamaican agriculture sector and relieve USAID of a substantial monitoring responsibility.

4. Other Impacts: Commercial Market Development and Commodity Selection

Market development objectives were not a primary consideration in the programming of Title I assistance to Jamaica during this period, and only a limited market development impact is evident. This limited impact was due in part to the fact that corn shipments were the bulk of the commodities supplied to Jamaica through the Title I program, and the United States was already the exclusive supplier of this market. It can in fact be argued that when the usual marketing requirement for corn was reduced from 115,000 to 50,000 metric tons in 1978, Title I corn shipments may well have supplanted some commercial sales.

In addition, market development might have been a more important consideration in programming if rice had been included in the commodity mix or if increased quantities of wheat and wheat flour had been programmed. However, objections from Guyana and other members of CARICOM in 1977 eliminated rice from programming consideration, and the three-year credit arrangement consummated between the GOJ and the Canadian Wheat Board in 1978 precluded the need for any sizable programming of either wheat or wheat flour. With respect to the programming of blended and fortified foods, no commercial market development appears to have resulted.

Title I commodity shipments did serve as a means of maintaining a link to the United States as a source of commodities during the period of Jamaica's balance of payments difficulties; resumption of more normal levels of commercial purchasing from the United States in the last few years confirms this observation. Also, Title I programming provided a valuable assurance of supply for Jamaica's commodity importing agency and domestic processors and wholesalers, which in turn had a positive impact on their commercial operations. During interviews with representatives of these agencies and firms, it was emphasized that in a period of considerable uncertainty for commercial importing and supply availability, Title I programming was said to have alleviated these concerns and offered the assurance of uninterrupted business operations.

Finally, the particular bulk commodities supplied through Title I do not appear to have had any long-term, negative consequences for Jamaica, as they complied with consumption and utilization patterns developed prior to their programming

through Title I. Moreover, Jamaica Nutrition Holdings was able to exercise sufficient flexibility in commodity selection to take best advantage of Title I concessional credit, i.e., relying on Title I for corn imports normally procured from the United States and using available Canadian credit for wheat and wheat flour imports.

V. LESSONS LEARNED AND RECOMMENDATIONS

A. Program Coherence

1. Elements of a Title I program--the resource transfer, the self-help measures, the local currency use agreements, financial terms, etc.--should relate to the principal objectives of the program as much as possible.

The team examined the relationship of the components of the Title I program to the program's principal objectives. These objectives concerned the worsening economic conditions in Jamaica and the necessity to achieve some economic and political stability, principally through the alleviation of growing balance of payments deficits.

By and large, the program elements were related to these objectives, although apparently not always by design. The concessional financing of food imports, of course, alleviated short-term balance of payments problems insofar as these imports would have occurred in any case. The self-help measures, buttressed by the agreements for local currency uses, permitted the GOJ to support previously agreed upon development activities, rather than insisting that the Government pursue new initiatives. This eased budgetary pressures on the Government. Other elements of the program involved support for the agricultural sector, where productivity increases were essential to longer term structural adjustment. Finally, the local currency use agreements facilitated flows of scarce foreign exchange from other donors by allowing the GOJ to meet counterpart obligations; GOJ delinquencies had previously impeded disbursements by those donors.

In addition, while the PL 480 agreements were not explicitly linked to IMF agreements on policy reforms, the connection, though implicit, was clear; the United States was obviously mindful of GOJ performance, and aid decisions, including those affecting PL 480, were made in this light.

Thus there was a general program coherence in Jamaica, although the PL 480 program was not employed in any direct way to encourage the GOJ to pursue additional economic reforms in furtherance of the necessary structural adjustment.

We believe that in circumstances where economic recovery through structural adjustment is the principal focus of an assistance effort, it would be useful to test the relevance of self-help measures against this objective, including those which support longer term development projects. Further, in such cases it may be wiser to focus self-help measures on policy reforms, rather than on discrete project-specific development activities--although admittedly it may be quite difficult to reach agreement within the U.S. Government and with the recipient government on such measures.

B. Competing Program Objectives

2. The pursuit of multiple objectives of food aid should not be allowed to distort the program, but should proceed in a way which supports accomplishment of the principal objectives.

The authorizing legislation for PL 480 mandates multiple objectives for the program. While this has given the program the flexibility to respond to a variety of recipient country needs and situations, in specific country circumstances these various objectives are likely to conflict with one another. The Jamaica Title I program provides a case in point; the foreign policy and balance of payments justifications for the program clashed with commercial market development interests. In the end, the latter gave way to accommodate the former. Specifically, the usual marketing requirement for corn was reduced in the 1978 agreement to allow continued programming of corn despite USDA's concern that Title I corn programming would simply replace commercial purchasing.

This outcome is not unexpected given the fact that foreign policy and balance of payments concerns were the primary motivations for Title I programming and greatly overshadowed commercial market development objectives. Not surprisingly, given this program context, the market development impact during this period was limited to maintaining existing access.

On the other hand, the potential for conflict between the objectives of long-run development and short-run balance of payments assistance should not be overdrawn. The foreign exchange crisis faced by Jamaica was structural in nature, reflecting a severe imbalance between sources and uses of foreign exchange, and could be expected to persist unless the structure of production and demand changed significantly. For instance, the required changes in the structure of production included better performance of the agricultural sector and increased output in those manufacturing subsectors where Jamaica enjoyed a comparative advantage. More generally, both the problem and the solution were highly developmental and not a matter of a brief shortfall in foreign exchange.

C. Disincentive Analyses

3. The analysis of potential disincentive effects of food aid needs to be carried out with adequate attention to the objectives which food aid is to serve, and to the recipient's overall food import policy and its other policies affecting food production.

In the first instance, food aid that is intended to provide balance of payments support contributes to foreign exchange availability only insofar as it does not contribute to increased imports of food. Thus, if food aid is essentially and effectively providing foreign exchange, there is not an issue of the direct disincentive effects of food aid, i.e., effects exclusively attributable to PL 480 through its effects in increasing food imports.

A distinct disincentive issue pertains to the role of PL 480 in supporting an overall food import policy that entails undue disincentives to domestic producers of food. PL 480 may have no direct disincentive impact (because it does not affect the overall level of food imports) but may have an indirect disincentive impact insofar as the overall level of food imports--a product of government policies--unduly discourages domestic food production and concessionally financed imports support these policies.

Furthermore, disincentive impacts are possible even where imported commodities are not produced domestically because they may be substitutes for locally grown products (e.g., imported wheat leads to consumer demand for bread rather than for locally grown, corn-based foods). The overall impact of imports need not necessarily be negative, however. In Jamaica, total food imports (we do not restrict the analysis to PL 480 commodities) comprised a set of commodities different from, but in significant measure substitutable for, those grown locally. Yet, by virtue of GOJ-promoted declines in import levels, a positive environment for domestic food production resulted.

D. Links to the IMF Program

4. It is important to note that agreements with the IMF are not sufficient conditions to ensure structural adjustment and should be scrutinized carefully by AID.

The Title I program was part of a larger U.S. assistance response designed to support policy efforts to promote economic recovery on a sustainable basis (i.e., structural adjustment). The GOJ program was formulated and implemented in the context

of two agreements with the IMF, first a Standby agreement in 1977, and then an Extended Fund Facility (EFF) agreement in May 1978. The IMF reviewed the EFF in May 1979 and was apparently quite satisfied. However, by the end of 1979, the agreement was suspended.

During 1978 and 1979, when the bulk of the assistance response took place and the agreed upon policies were being implemented, structural adjustment did not take place. Indeed, the resource balance actually worsened in real terms, as domestic demand rose absolutely and relative to GDP. One reason for this poor performance was that the foreign trade policy--particularly the quantitative restrictions on competing imports and the rationing of noncompeting imports--remained basically intact. The IMF was aware of these obstacles to adjustment, but was not able to negotiate conditions providing for their removal.

The lesson is that an agreement with the IMF--even if adhered to--is not a sufficient condition for structural adjustment. In making recommendations about assistance responses, missions should scrutinize the provisions of IMF programs, rather than assuming that an agreement with the IMF automatically warrants support. In fact, the Mission was on record as doubting that the IMF program would work, although we have not found a sufficiently detailed account of these doubts to judge whether their analysis was on target or not.

At the same time, Jamaica's experience in 1976, 1977, and 1980 indicates that however painful the IMF prescriptions, the alternatives are even more painful. In those years, positive adjustment occurred, but only through large absolute declines in GDP and even larger declines in domestic demand.

E. Self-Help Measures and Self-Help Reports

5. Self-help reports should be treated as important elements in the design and implementation of Title I programs.

The self-help reports submitted by the GOJ were not useful in determining program impact or in facilitating judgments about future determinations of self-help measures or local currency uses. There is considerable scope for upgrading the quality and utility of these reports so that they can be used as a basis for discussions of progress, problems, and future resource allocations.

The extent of the integration of food aid and nonfood aid is not limited to the program or project design phase. Important opportunities exist in the course of reviewing the

implementation of Title I agreements to strengthen all elements of the Mission's program as well as to identify new possibilities for integrated programs. In this regard, we encourage the greater participation of different offices in field missions in the review of self-help reports as well as the identification of important self-help measures.

Further, the negotiation of self-help measures should not be limited to USAID and a single host-country counterpart agency. Including the line ministries and agencies which will be responsible for implementing these measures in the negotiation process would do much to ensure a more complete understanding of and commitment to the purposes of these measures.

F. Feeding Programs

6. The continued inclusion of feeding programs in Title I agreements over an extended period of time should be reconsidered. If they are continued, the preferred mechanism for support, at least for school feeding, may be counterpart generation and commodity purchases on the local market.

The long-term support under Title I of feeding programs (which were originally supported under Title II) is questionable. As an interim device to facilitate a shift of financial and managerial responsibility to the recipient government, they can be effective, and this mechanism should be considered when Title II programs are entering a transition phase. At the same time, there may be a tendency to ignore the feeding programs--to allow them to become lost in the program shuffle and largely subordinated to the programmatic objectives of Title I. In the case of Jamaica, there were acknowledged issues of program efficiency, cost effectiveness, and impact, but these were not explored as they might have been had the program been a straight Title II effort.

The school feeding activity, in particular, involved serious questions of impact. Similarly, the issues presented by the MCH program were important, but in this case at least, the Mission was examining them in the context of its overall program of health-sector support.

We think serious consideration should be given to phasing out support for the school feeding program. If support is continued, the mechanism should involve, for the rural program at least, the generation of local currency by the sale of Title I commodities and the use of these currencies to purchase commodities on the local market.

G. Title I Impact Evaluations

7. Where programs are as diverse as they are in Jamaica, and where self-help measures and local currency allocations extend to several discrete projects and even sectors, it is not profitable to attempt to evaluate these components comprehensively. At best, the process by which self-help measures and local currency uses are identified and agreed to should be carefully evaluated to determine whether all interested parties in the recipient country government as well as in USAID and the country team are involved in the agreement process.

The team took on the challenge of evaluating the Title I program to determine a variety of potential impacts: political, economic, U.S. market development, humanitarian, etc. We found that it was not possible in the time available to examine all the impacts in sufficient depth. Particularly, we were unable to look comprehensively and carefully at the impact of the diverse self-help measures and local currency uses over time. We suspect that in the great majority of cases, a reliable and incisive examination of the impact of project-related self-help measures and local currency uses would demand a level of effort comparable to that usually associated with an evaluation of a major development activity--such as a sector loan.

Finally, in pursuing evaluations of Title I programs, the distinctive character of such activities should be kept in mind and should guide the evaluation methodology. Title I activity programs are invariably motivated by macroeconomic concerns. They are, at bottom, resource transfers, and though important development gains can be made through self-help measures and local currency allocations, it is not likely that these types of gains will be of the magnitude of those achieved through development-assistance projects. If Title I programs are essentially resource transfers, then the principal impacts will not be ascertained by evaluations of such elements as institutional change, technology transfers, or small farmers' benefits, but rather by reference to economic indicators and policy reforms which may have been associated with the resource transfers. The most appropriate Title I site visit may be to the Ministry of Finance. Alternatively, if Title I programs are evaluated unselectively--i.e., looked at as a collection of projects funded with local currency, of covenants and commitments reflected in self-help measures, or of opportunities for U.S. agricultural export market development--then the evaluation becomes inordinately lengthy and costly.

H. The Timing of Agreements

8. Agreements should be signed as early in the fiscal year as feasible and consistent with sound programming principles.

Signing of Title I agreements late in the U.S. fiscal year has been a source of considerable dissatisfaction for Jamaican officials involved in PL 480 operations. In recent years, the programs have been signed earlier, and this improvement should be continued with the goal of having the program authorized and signed by the end of the second quarter of the fiscal year.

Early signing of the agreement offers a number of advantages: the assurance of supply of the commodities is greater; counterpart funds are generated sooner with earlier deposits into the Title I special account; storage problems are alleviated to the extent that imports can be scheduled over a longer period of time and in smaller shipments; and the blended and fortified foods can be distributed more evenly, without encountering a need to import quickly before the end of the fiscal year. At the same time, care must be exercised so that the ability of the United States to obtain recipient country agreement to important self-help measures is not compromised by undue haste to sign agreements.

If the blended and fortified foods portion of the program is continued, it is recommended that the program be adjusted to provide for deliveries three times a year as recommended by the Jamaican agency, PAMCO, in its annual report on the feeding programs. This would avoid the problems of spoilage and uneven distribution which have been encountered by the feeding programs in the past.

I. Cargo Preference

9. Cargo preference requirements impose additional costs on the program.

The application of the cargo preference requirement that 50 percent of Title I commodities be shipped on privately owned U.S. flag vessels has been the source of many problems for Jamaica's import officials. Moreover, demurrage charges resulting from the need to utilize large U.S. flag vessels to comply with cargo preference has impeded achievement of the balance of payments relief for which the program was intended.

These problems are faced by all Title I recipient countries and are unlikely to change in the immediate future. In

light of this, program managers need to administer the program in such a way that these problems are mitigated to as great an extent as possible.

J. Donor Coordination

10. In cases where a large number of foreign donors are rapidly increasing their levels of assistance and areas of involvement in a country, it is important that the donors make every effort to simplify the situation as much as possible for the recipient country.

Donor coordination at the earliest stages of an increase in assistance is the responsibility more of the donors themselves than of the host-country government. To act otherwise is to risk unduly burdening a government bureaucracy which may be understaffed and already deeply involved in the effort to keep the country from sinking further into a crisis. In addition, effective coordination may increase our knowledge of anticipated levels of food imports and other activities which may influence our views on needed self-help measures and local currency allocations. (See discussion in Appendix J.)

APPENDIX A
BACKGROUND NOTES ON JAMAICA

BACKGROUND NOTES ON JAMAICA¹

I. STATISTICAL PROFILE

A. General Data

Population: 2.2 million (1978 est.)
Annual Growth Rate: 1.4%
Literacy: 82%
Infant Mortality: 23/1,000
Work Force: 672,000 (1975)
Government: Constitutional Monarchy

B. Economic Data (1978)

Central Government Revenue: \$762.39 million (1979/1980 est.)
GNP: \$2.4 billion
Real Growth Rate: 1.7%
Per Capita Income: \$1,143
Inflation: 45%
Official Exchange Rate: Jamaica\$1.55 = U.S.\$1

II. DESCRIPTION

A. People

Jamaica's 2.2 million inhabitants (in 1978) are primarily of African origin (76.3 percent), with a diversity of other groups. Historically, Jamaica has enjoyed harmonious racial and cultural relations. Jamaica's national motto, "Out of Many, One People," suggests their desire for harmony. Class distinctions which have lingered from the colonial period are being reduced as social mobility through education and greater opportunities for property ownership increase.

Religion plays an important part in the life of most Jamaicans. The Anglican Church is the largest of the established churches, followed by numerous Baptist sects, the Roman

¹The material in this appendix is excerpted from "Background Notes: Jamaica," U.S. Department of State, Bureau of Public Affairs, July 1980.

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Catholic Church, and the Methodist Church; evangelical and revivalist sects are particularly popular. Jamaica has several Muslim and Hindu groups, along with a Jewish community which numbers about 600.

Education is free and compulsory to age 14 for almost all schools, which are organized into three categories: primary (ages 6-12), junior secondary (12-15), and senior secondary (15-19). Literacy is estimated at about 82 percent.

Emigration by Jamaicans historically has been heavy. Since the United Kingdom restricted emigration in 1967, the major flow has been to the United States and Canada. About 15,000 Jamaicans enter the United States and 5,000 enter Canada each year in immigrant status. In addition, several thousand Jamaicans enter on visitor's visas yearly. Many remain here either legally or illegally. New York, Miami, Chicago, Hartford, and Milwaukee have significant Jamaican populations.

A vigorous arts and cultural movement, which began in the 1930s and 1940s, has continued to develop in Jamaica under active governmental and private sponsorship. Jamaican writers, artists, and performers are engaged in an active search through the nation's ethnic, particularly African, folk origins for a cultural identity and expression suitable for their multiracial society.

B. Geography

Jamaica is the third largest island in the Caribbean, covering 11,424 square kilometers (4,411 square miles). Mountains cover about 80 percent of its surface. The climate is humid and tropical most of the year, but temperatures from November to March are cooler, particularly along the north shore, where the range is between 21°C and 27°C (70°F-80°F). Rainfall is seasonal, with striking regional variations. Some northern regions receive up to 506 centimeters (200 inches) a year, and the southern and southwestern plains receive almost none at all. The annual average rainfall is 196 centimeters (77 inches). Jamaica has not been hit by a major hurricane since 1951, although tropical storms in 1979 caused extensive flood damage.

C. History

Jamaica was discovered in 1494 by Christopher Columbus and settled by the Spanish during the early 16th century. In 1655, British forces occupied the island, and in 1670 Great Britain gained formal possession through the Treaty of Madrid.

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Sugar and slavery made Jamaica one of the most valuable possessions in the world for more than 150 years. Slavery was abolished in 1838, some years before emancipation was declared in most other parts of the New World.

After a long period of direct British colonial rule, Jamaica began to achieve a semblance of local political control in the late 1930s. This period of development was marked by social unrest and occasional violence. During this time, the groundwork for Jamaica's leading political parties was laid by Sir Alexander Bustamante (Jamaica Labour Party, JLP), who died in August 1977, and his cousin, Norman W. Manley (People's National Party, PNP), who died in September 1969.

These two political parties, having their roots in well-organized and powerful rival trade unions, have dominated the Jamaican political scene since the institution of adult suffrage in 1944. The JLP formed the first government under adult suffrage in 1945 and won again in the 1949 election, but it lost to the PNP in 1955. Since then the two parties have alternated in power and have each maintained about one-half the electorate.

In 1958, Jamaica joined nine other British territories in the formation of the West Indies Federation but withdrew when, in a national referendum held in September 1961, Jamaican voters rejected membership.

Jamaica attained its independence from the United Kingdom in 1962 and has remained a member of the Commonwealth.

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EVALUATION METHODOLOGY

The task of evaluating a Title I food aid program presents a number of problems of design, which flow from the numerous purposes and multiple facets of the program. As a transfer of relatively quick-disbursing aid, Title I programs can have significant macroeconomic impacts. The introduction of large quantities of food can affect domestic food pricing policy and production in the recipient country. Foreign policy impacts may have been intended for the program; food imports could serve to calm a hungry, restless urban population. Food aid can serve to create longer term markets for the United States. Food can be directed to the most needy and thus serve humanitarian objectives. Finally, food aid can promote long-term development objectives through its linkage with policy reforms, self-help measures, or specific allocations of the counterpart generated by the sale of the Title I commodities.

Given this universe of potential impacts, defining the evaluation's scope was particularly important. One approach would have been to explore impact in all the areas listed above and, in so doing, test the feasibility of this broad-brush approach. A number of constraints to this method were apparent, involving data collection, shortage of time for complex economic analysis, the difficulties of becoming sufficiently familiar with the projects and programs comprehended by the many self-help measures in the food aid agreements, and so on. For example, the Jamaica Title I self-help measures included the sectors of education, nutrition, agriculture, family planning, and housing. According to the Government of Jamaica (GOJ) annual self-help reports, each measure has been accomplished by progress in at least one and often several discrete programs--some of which are AID-financed, some funded by other donors, and others funded wholly by the GOJ. To assess impact in even one sector could present exceptional demands for data collection, extensive interviewing, developing strong background in the sector, etc.

To meet these needs with respect to several sectors would present a virtually impossible task; it would require far too large a team and too much time in the country. The task would be made all the more difficult by the fact that the evaluation was to cover a period of several years, in this case, FY 1975-1980. An alternative, scaled-down approach would have been to ignore the impact of the self-help measures and the local currency uses, in light of the impression that the food-aid flows to Jamaica were largely motivated by foreign policy and macroeconomic considerations.

The team rejected these approaches and decided to look selectively at self-help measures--in effect, to see what

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might, in a very brief period, be learned about a number of discrete projects, what that knowledge says about compliance with selected self-help measures, and in turn what that says about the impact of self-help measures generally.

This effort was undertaken, and the results of project-specific reviews can be found in Appendixes F, I, J, and K. The team concluded that it is possible in a very brief period of time to identify problems with projects that are supported by local currency generations (these projects are usually known to GOJ and USAID project officers) and to report on impressions of impact. Our findings are included in the report. But they are advanced with considerable trepidation, since invariably an understanding of the initial constraints and objectives of the activity; the project design rationale; and intervening political, economic, administrative, and other circumstances are most important to understanding why a particular impact occurred.

Nevertheless, team members did reach some conclusions about some of the projects they visited. Their conclusions were based on reviews of other evaluations, progress reports, project papers, and conversations with USAID and GOJ personnel. While we believe the conclusions are valid, we think the experiment proved that the task was not worth the effort. The observations are too project-specific. Thus, for example, the conclusions about vocational training, curriculum reform, and teacher training cannot provide a basis for a broader statement about performance under the several self-help measures pertaining to the education sector.

Efforts to assess the macroeconomic impacts of the assistance involved a review of a wide variety of reports and analyses of the Jamaican economy, and interviews with USAID, Embassy, GOJ, and IMF personnel, as well as individuals in the private sector with a view to determining context, motivations, aspirations, and impact.

The transfer of food (rather than funds) gave rise to two distinct dimensions of impact. One impact relates to the food destined for the maternal and child health (MCH) and the school feeding programs; this food was not sold commercially, but was transferred to the Ministries of Health and Education. The evaluation included an essentially separate assessment of these programs (see Appendix I).

An evaluation of the other impact required a macroeconomic analysis of the effect on the Jamaican economy of over \$40 million worth of imported food. Was the food additional, or would it have been imported anyway, with the GOJ diverting foreign exchange to buy it? Did it depress production by Jamaican farmers, as increases in supply led to reductions in both consumer prices and returns to farmers? Did it serve to postpone

the day hard policy choices would have to be made, or did it encourage and support these choices? By generating local currency for the GOJ, did it divert the Government's attention from the need to improve revenue-generation measures? Food as an aid instrument involves all these issues and the team sought to examine them.

While examining impacts, we were always mindful of the importance of understanding the decisionmaking process that determined how food aid was provided; for example, how allocation decisions were made or self-help measures were identified. Without knowing how decisions were made, who made them, and why, the team believed it could not understand how some impacts occurred or what changes in Title I procedures might be appropriate to improve impact. Thus, if self-help measures did not stimulate greater performance by a ministry, was it because ministry personnel were not consulted in the formulation of the measures? Should the process be modified to include them? Similarly, was the level of impact of feeding programs affected by the regularity of the supply of food? Was the process of commodity selection, purchasing, and distribution sound? An appreciation of the mechanics of food aid appeared to be crucial to judgments about impact.

In the course of examining these questions, the team attempted to identify and address several important generic issues which attend the food aid program. One intention was to derive from our brief exposure to the Jamaican program some ideas and recommendations about food aid programs generally. These efforts are reflected in the body of the report in Section V.

Finally, the team decided to keep the time devoted to field visits and preliminary report drafting in-country as short as possible--no more than three weeks. It was an experiment which assumed that very modest efforts could be made to discern the impact of local currency uses and miscellaneous self-help measures.

Several conclusions were drawn based on this methodology.

1. Evaluating selective self-help measures and local currency allocations in a program where the principal purposes are related to macroeconomic crisis conditions can be presumed to be a waste of time, since little information that was reliable or valuable could be learned. However, where the self-help conditions are more focused and related directly to the principal purposes of the food aid agreement, then their evaluation would be appropriate.

2. AID/Washington should consider whether Title I food aid programs, so often designed and justified on macroeconomic grounds, are appropriate subjects of impact evaluations as these have evolved over time. At the least, the dimensions of programs selected for evaluation should be such as to raise questions about impact on domestic producers and on the poorest segments of society (when prices fall or rise).
3. The complexities of food aid will normally require at least one evaluation team member who is versed in the process of commodity identification and selection, the implications of the interagency approval system, and other similar background issues. Economic expertise is, of course, also essential.
4. It should be assumed that a careful analysis of the economic impact of the program will be time consuming and will require much effort after the field visits.

APPENDIX C

PL 480 PROGRAMS: GENERAL OVERVIEW
AND ISSUES OF FOOD AID

I. PL 480 PROGRAMS: GENERAL OVERVIEW

Public Law 480, or the Food for Peace program, is the primary means by which the U.S. Government provides food assistance to developing countries. Enacted in 1954, PL 480 has four legislative objectives: (1) provide humanitarian assistance; (2) support economic development within recipient countries; (3) expand international trade and develop markets for U.S. agricultural commodities; and (4) promote the foreign policy of the United States. Since its inception, 292 million metric tons of commodities valued at \$32 billion have been exported through PL 480 programs.

PL 480 authorizes three programs through which the United States can provide food assistance:

Title I: Title I of PL 480 authorizes the U.S. Government to finance the sale of agricultural commodities on concessional terms--low interest rates and long repayment terms--to "friendly" developing countries. Sales are financed through the Commodity Credit Corporation (CCC) of the Department of Agriculture.

Commodities imported through Title I are generally sold on the local market by the recipient country government. Currencies generated in this manner are available for use by the recipient government. Depending upon the particular country involved, they may be allocated to support self-help development measures specified in the Title I agreement or for general budgetary support in selected sectors which are also identified in the agreement, e.g., agriculture, nutrition, health, or education.

Title III: In 1977, Congress authorized the "Food for Development" Title III program. Title III programs are similar to those of Title I, but provide for forgiveness of the original CCC loan if the recipient government uses the local currencies or the commodities themselves to implement programs in agriculture and rural development, nutrition, health services, and population planning which are specified in the Title III agreement. To facilitate development planning and to encourage country participation, Title III authorizes multiyear PL 480 agreements of up to five years.

Title II: Title II authorizes donations of U.S. food to developing countries to meet famine or other urgent relief requirements, to combat malnutrition, and to promote economic and community development. Donations are made through U.S. private voluntary agencies such as CARE and Catholic Relief Services, through the World Food Programme of the United Nations, and through government-to-government grants. Unlike

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the Title I and III programs, which are designed to augment the aggregate supply of food within the recipient country and to be marketed through existing commercial channels, Title II commodities are generally targeted to specific nutritionally vulnerable groups within the recipient countries. Direct feeding programs support maternal and child health activities, school-feeding, and food-for-work projects.

II. PL 480 TITLE I: CONCESSIONAL SALES

A. Country Eligibility and Selection

Consideration of Title I food assistance for any country formally begins when the recipient government makes an official request for assistance to the U.S. Embassy or USAID Mission. In most cases, however, the formal request follows discussions on the domestic food and agriculture situation between local government officials and Embassy/USAID staff. Moreover, for those countries which are traditional Title I recipients, work on preparing the program proposal may begin in anticipation of receiving the official request.

The U.S. country team¹ within the Embassy reviews and analyzes the request for a Title I program and assesses the need for food assistance. If viewed favorably, the request, along with the country team's analysis and recommendations, will be forwarded to Washington for review. The request must also be accompanied by supply and distribution data for whatever commodities are being requested by the recipient country government. Specifically, the supply and distribution data must include beginning stocks, local production, imports, consumption, exports, and ending stocks for the previous five years and estimates for the current year. Imports must also be identified by country of origin and indicate whether they are commercial or concessional.

Since 1977, Section 401(b) of PL 480 also requires that the country team provide information so the Secretary of Agriculture can certify that adequate storage facilities are available in the recipient country to prevent waste or spoilage of the commodities to be imported and that local distribution of the commodity will not result in a substantial disincentive to or interference with domestic production or marketing (Bellmon

¹Depending on the country involved, the U.S. country team may consist of various USAID and Embassy staff members and the agricultural counselor or attache.

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determination). This information need not accompany the official request, but it must be provided and the certification made prior to the initiation of formal negotiations with the recipient government.

Review of requests for Title I food assistance and decisions on allocating available Title I financing are made in Washington by an interagency committee--the Food Aid Subcommittee of the Development Coordination Committee.² The Subcommittee is chaired by a representative of the Department of Agriculture. Voting members include representatives from the Departments of Agriculture, State, Treasury, and Commerce; the Agency for International Development; and the Office of Management and Budget. Each voting member has one vote and decisions are made by consensus. In those cases where inter-agency consensus cannot be achieved at the working-staff level, issues will be directed to higher councils of Government for resolution. While these issues are generally resolved at the Cabinet or sub-Cabinet level, in some instances a Presidential decision may be required.

When deciding on individual country allocations of Title I financing, the Subcommittee considers how each proposed country program will contribute to achieving the four legislative objectives of the program: (1) providing humanitarian assistance; (2) supporting economic development; (3) expanding international trade and developing export markets for U.S. agricultural commodities; and (4) promoting the foreign policy of the United States. In addition, country allocations will be influenced by Section 111 of the PL 480 Act which mandates that at least 75 percent of all Title I/III commodities shall be programmed to countries whose per capita income level falls below the criterion established for development loan financing by the International Development Association of the World Bank.

A further important factor which the Subcommittee will consider in allocating Title I food assistance is the existence of a "food gap" within the proposed recipient country. The "food gap" is the difference between current year food import requirements derived from the supply and distribution data supplied by the country team with the Title I request and the recipient government's other commercial and concessional imports of food. Hence the foreign exchange position of the requesting government and its ability to import commercially are factored into consideration of the Title I request.

²Prior to 1978, this committee was known as the Inter-Agency Staff Committee (IASC). In 1978, to forge a stronger link with the Development Coordination Committee, the IASC was reorganized and renamed, but membership and procedures were not greatly altered by this change.

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Title I may also be allocated to a country which does in fact have the ability to meet its total food import requirements through commercial purchases. In this instance, the program may be designed to free up foreign exchange for other imports, particularly those which directly contribute to economic development programs.

Once Washington review of the proposed Title I program is completed and the size and details of the program are determined, negotiating instructions are drawn up and sent to the Embassy. Negotiations are authorized once the Bellmon storage and disincentive certification and consultations with third country exporters are completed.

B. Commodity Selection

The criteria by which commodities are chosen for inclusion in PL 480 programs are mandated by Section 401 of the Act. Specifically, this section requires that the Secretary of Agriculture make an annual determination that the programming of each commodity will not reduce the domestic supply of the commodity below a level needed to satisfy U.S. domestic requirements, commercial exports and adequate carry-over. In addition, the cost-effectiveness of individual commodities is considered before they are made available for programming. In recent years, commodities programmed under Title I have been wheat, wheat flour, rice, feedgrains (corn and sorghum), vegetable oil, blended and fortified foods, and cotton.

Selection of commodities for programming to individual Title I recipient countries is also guided by the PL 480 Act. In particular, Section 103(c) and (n) require that Title I sales not displace U.S. commercial export sales nor unduly disrupt world prices of commodities and normal patterns of commercial trade.

To carry out these provisions of the Act, usual marketing requirements (UMRs) are established for each commodity included in a Title I agreement. UMRs represent the average annual volume of commercial import purchases during the previous five years. Title I assistance must be "additional" to the normal level of commercial purchases established in the UMRs. That is, the volume of any particular commodity which can be programmed to a recipient country is the difference between its total consumption requirements (minus domestic production and stocks) and the normal level of commercial imports identified in the UMRs. Where two or more commodities could be programmed using this criterion but overall assistance is limited by budget availabilities, commodities will be programmed which show the greatest export-market development potential for that particular country.

In signing a Title I sales agreement, the recipient government explicitly agrees to purchase commercially the volume of commodities stated in the UMRs. For some commodities a "tied" UMR may also be included in the agreement. A tied UMR requires the recipient government to purchase a specified portion of its total UMR from the United States.

As previously noted, commodity selection is also guided by Section 401(b) of the PL 480 Act in that whatever commodities are chosen must not be a disincentive to domestic production and marketing and adequate storage and handling facilities must be available for importation. Title I agreements also prohibit the resale or transshipment of the commodities (export restriction) and prohibit the export of similar commodities (export limitation) to insure that the commodities are not used to increase commercial exports from the recipient country.

C. Financial Terms

The concessional nature of Title I export financing comes from the financial terms of the agreements. The specific terms included in any agreement depend largely on the financial condition of the recipient country government.

Guidelines for Title I financial terms are provided by Public Law 480 and the Foreign Assistance Act of 1961. Repayment of the CCC loan is either in dollars or local currency which is convertible to dollars. Maximum repayment periods range between 20 years for dollar credit and 40 years for convertible local currency credit. Generally, 40 year repayment is limited to the poorest recipient countries. Title I agreements also provide for a grace period of between 2 and 10 years before repayment is required. Minimum interest rates, as established by the Foreign Assistance Act of 1961, are 2 percent during the grace period and 3 percent thereafter.

Title I agreements may also require an initial payment by the recipient country at the time of delivery of the commodities at a U.S. port. These initial payments range between 0 and 10 percent, although 5 percent is used in most cases. Title I agreements in some cases may require a currency-use payment (CUP). This allows the U.S. Treasury to request a payment on demand of local currency for use by the U.S. Embassy within the recipient country, thereby helping the United States to avoid expending its own foreign exchange to purchase the necessary local currency. Currency-use payments usually range between 0 and 10 percent of the total amount of the Title I agreement.

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D. Title I Operations

In accordance with Section 103(e) of PL 480, Title I purchasing and shipping must use private trade channels within the United States to the maximum extent practicable. Section 115 and Title I regulations require that all purchases of food commodities be made on the basis of an invitation for bids (IFB) issued by the recipient government's embassy or other purchasing agency. IFBs must be publicly advertised in the United States, and offers must conform to the terms of the IFB and must be received and publicly opened in the United States. All awards of sales must be in conformance with the terms of the IFB, and all sales are reviewed and approved by officials of the Department of Agriculture.

Financing of Title I is provided by the Commodity Credit Corporation (CCC) and is carried out through the U.S. commercial banking system. Following the signing of a Title I agreement, the recipient country government requests the issuance of purchase authorizations (PAs) which provide information on the commodities to be purchased, the timing of the purchasing and deliveries, and the financing available. With the issuance of a PA, the CCC issues a letter of commitment to the U.S. bank selected by the importing country. The letter of commitment guarantees to repay the U.S. bank, through a designated Federal Reserve Bank, for payments made to U.S. commodity suppliers for delivery of the commodities. U.S. commodity suppliers are paid promptly under letters of credit opened by the importing country through the U.S. commercial bank holding the CCC letter of commitment, once documentation is presented that the commodities have been delivered. The Federal Reserve, acting as agent for CCC, in turn reimburses the U.S. bank. Repayment of the Title I loan is made in dollars by the recipient country government directly to the CCC, according to the repayment schedule contained in the Title I agreement.

PL 480 commodity shipments are subject to the provisions of the Cargo Preference Act, which requires that 50 percent of commodities be shipped on privately owned U.S. flag vessels to the extent such vessels are available at fair and reasonable rates. When U.S. flag vessels are used, the CCC will finance the ocean freight differential--the differential which exists between foreign-flag and U.S.-flag rates. Approximately 12 percent of the Title I annual budget is used to finance ocean freight differential payments.

E. Self-Help Measures and Local Currency Generations

Section 109 of PL 480 requires that before Title I assistance is provided, consideration be given to the extent to which the recipient country government is undertaking self-help measures to increase per capita production and improve local storage and distribution of agricultural commodities. In addition, Section 109 mandates that each Title I agreement describe the program which the recipient country is undertaking to improve its production, storage, and distribution of agricultural commodities. Accordingly, each Title I agreement specifies a number of self-help measures which the recipient country government agrees to undertake as part of the program of Title I assistance. Section 106(b)(2) expands the scope of self-help measures beyond the emphasis of Section 109 on agricultural production, storage, and distribution to include the broader categories of agricultural development, rural development, nutrition and population planning, and programs directed at achieving the policy objectives of Section 103 and 104 of the Foreign Assistance Act of 1961.

Section 106(b) of PL 480 also mandates that all Title I agreements specify that currencies generated from the local sale of the Title I commodities be used for the economic development purposes described in the self-help measures, as well as for programs of agricultural development, rural development, nutrition, and population planning.

Both the self-help measures and the provisions for use of local currency generations are negotiated between the U.S. country team and officials of the recipient country government, generally in advance of formally negotiating the Title I agreement. As part of the Title I program, the recipient government also agrees to submit an annual report detailing progress made in implementing self-help measures.

III. THE ISSUES OF FOOD AID

The following are among the aspects of food aid which present particular issues pertinent to this form of assistance.

-- Multiple objectives. Food assistance is not exclusively a development-assistance instrument. Rather, its authorizing legislation provides multiple objectives for the program, including market development for U.S. agricultural commodities, humanitarian and emergency assistance, and furtherance of more immediate U.S. foreign policy objectives. While this multiplicity of objectives offers a positive element to the program by gaining

support for it from a range of political interests, it has at times created uncertainty and confusion as to the principle objectives of assistance to individual recipient countries. This is particularly the case given the inter-agency decision-making process which governs food assistance allocations, wherein the program's various objectives each has its own agency advocates.

-- Quick disbursement. In most cases, food assistance is allocated, purchased, shipped, and sold locally within the same year. Thus, food assistance is far more suitable as a response to immediate and short-term needs than development assistance, which may be disbursed over several years. Moreover, because food aid is generally allocated on a single-year basis, it serves more effectively as a near-term resource transfer, but is less reliable as a means of addressing longer term development problems.

-- Potential disincentive impact. It is widely recognized that poorly designed food assistance may serve as a disincentive to agricultural production and marketing within recipient countries. For example, food assistance sold commercially on the local market may depress prices received by local farmers and thereby discourage them from increasing their own production. Alternatively, a disincentive may result if recipient governments begin to rely on food assistance while failing to devote sufficient resources to or make the policy or institutional changes necessary for their own agricultural development. Likewise, a recipient government may become dependent on the budget support gained from selling food assistance on the local market.

On the other hand, it is argued that food aid can fill food-gap needs which may arise when an economy is growing rapidly. This situation would apply when domestic food production along with the capacity to import food cannot keep pace with overall growth in demand for food. Moreover, food assistance can help meet food shortages produced by emergency situations. And as a vehicle for conserving foreign exchange (thus contributing to economic and political stability), food aid can ease balance of payments pressures.

-- Handling and distribution. Food assistance is unique in that operational factors involved in shipping and distributing the commodities will have an impact on the recipient country and will influence achievement of the program's objectives. The program in countries with poorly developed infrastructure is most likely to be adversely affected in this regard.

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-- Consumption patterns and nutritional value. Consumption patterns within the recipient country may be influenced by food assistance, although this will depend on a range of factors unique to individual country programs and situations. In judging whether this adjustment is positive or negative, the change must be reviewed in relation to the impact on the nutritional status of the population, local agricultural production and marketing, and consequences for the country's foreign trade and balance of payments situation.

I. BACKGROUND ON THE PL 480 TITLE I PROGRAM FOR JAMAICA

The present series of PL 480 Title I programs in Jamaica began in FY 1974, when an agreement was signed with the Government of Jamaica (GOJ) to provide \$800,000 worth of blended and fortified foods. Similar, although somewhat larger programs were programmed in FY 1975 and FY 1976. The 1976 agreement also expanded the commodity mix to include a modest amount of vegetable oil.

The commodities supplied in these early programs were used to support the school feeding and maternal and child health (MCH) feeding programs, administered by the GOJ. Prior to 1974, blended and fortified foods used in these feeding programs had been supplied through a PL 480 Title II donations program. Between 1967 and 1973, approximately \$29.8 million of Title II assistance had been provided. The transition in FY 1974 to a Title I concessional sales program was the result of a decision by the Inter-Agency Staff Committee in Washington. Because of Jamaica's relatively high level of GNP per capita, it was decided to phase out the Title II program in favor of a Title I program. It was further decided that all U.S. food assistance to Jamaica would end after FY 1975.

The termination of Title I assistance did not occur in FY 1976 as planned. Rather, the program continued and was expanded in 1977 to a level of \$12 million as part of a larger package of U.S. development assistance (see Appendix E). With the large increase in size in 1977, the Title I program also changed in character to reflect the more traditional purpose of Title I agreements. Corn, wheat, and wheat flour were added to the commodity mix to be resold by the GOJ on the domestic Jamaican market. Similar Title I agreements followed in FY 1978 through FY 1980 at the level of \$10 million per year.

In the years 1975 through 1980, the period covered by this evaluation, \$46 million in Title I food commodities were programmed to Jamaica (see Table D-1). This financing was expected to provide 348,000 metric tons of commodities. Actual shipments during this same period were 328,200 metric tons, valued at \$43.6 million. The difference between programming and shipment data resulted from price variations at actual time of purchase, shipping tolerances,¹ and any late shipments in the 1980 program which may have carried over and been recorded in 1981.

¹Sales of bulk grains are generally made with a tolerance factor of plus or minus 5 percent. In Title I agreements where dollar financing is controlling, sales are registered at the upper tolerance to ensure that full Commodity Credit Corporation (CCC) financing is available. Thus, actual shipments could be as much as 10 percent below the programmed dollar levels.

Table D-1. PL 480 Title I--Jamaica:
Agreements Signed and Commodities Supplied,
FY 1974-1980¹

Fiscal Year and Commodity	Agreements Signed		Shipments ²	
	\$ Mil.	000 MT	\$ Mil.	000 MT
<u>1974</u>				
Blended/Fortified Foods	0.8	1.8	0.5	1.8
<u>1975</u>				
Blended/Fortified Foods	1.5	5.2	-	-
<u>1976 and Transition Quarter</u>				
Soybean/Cottonseed Oil	0.3	0.5	-	-
Blended/Fortified Foods	2.2	7.4	1.3	5.2
	<u>2.5</u>	<u>7.9</u>	<u>1.3</u>	<u>5.2</u>
<u>1977</u>				
Wheat/Wheat Flour	4.0	36.0	-	-
Corn	7.4	73.0	0.2	2.6
Soybean/Cottonseed Oil	0.6	0.7	0.7	1.2
Blended/Fortified Foods	-	-	2.2	10.0
	<u>12.0</u>	<u>109.7</u>	<u>3.1</u>	<u>13.8</u>
<u>1978</u>				
Wheat/Wheat Flour	-	-	3.7	25.3
Corn	8.0	72.0	8.5	90.2
Soybean/Cottonseed Oil	0.4	0.5	0.6	1.0
Blended/Fortified Foods	1.6	5.1	-	-
	<u>10.0</u>	<u>77.6</u>	<u>12.8</u>	<u>116.5</u>
<u>1979³</u>				
Wheat/Wheat Flour	1.0	4.6	1.0	3.9
Corn	8.0	73.0	12.1	107.2
Soybean/Cottonseed Oil	1.0	1.2	0.9	1.3
Blended/Fortified Foods	-	-	1.6	5.7
	<u>10.0</u>	<u>78.8</u>	<u>15.6</u>	<u>118.1</u>
<u>1980</u>				
Wheat/Wheat Flour	1.0	3.8	1.0	4.2
Corn	6.8	59.0	7.4	63.0
Soybean/Cottonseed Oil	0.7	1.0	0.7	1.4
Blended/Fortified Foods	1.5	5.0	1.7	6.0
	<u>10.0</u>	<u>68.8</u>	<u>10.8</u>	<u>74.6</u>
Total 1974-1980	46.8	349.8	44.1	330.0

¹U.S. fiscal years.

²Shipment data were taken from bills of lading submitted to USDA's Commodity Credit Corporation.

³Title I food assistance provided in FY 1979 was accomplished through a series of amendments to the FY 1978 program. However, in terms of budget allocations for the overall Title I program, the two years should be considered separately.

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Of the Title I commodities shipped to Jamaica during the evaluation period, corn made up the bulk of the shipments, representing 80 percent of total volume (263,000 metric tons) and 65 percent of total value (\$28.2 million). Wheat and wheat flour shipments totaled 33,400 metric tons (\$5.7 million); vegetable oil totaled 4,900 metric tons (\$2.9 million); and blended and fortified foods totaled 26,900 metric tons (\$6.8 million).

The financial terms of the FY 1975 and FY 1976 agreements provided dollar credit, 18-year repayment, 3-percent interest, and required a 5-percent initial (down) payment. With the changes in the FY 1977 agreement, the financial terms were also adjusted. The new agreement provided for convertible local currency credit and a 12-year repayment period. A grace period of 3 years during which payments of principal were not collected was also added to the 1977 agreement. The 3-percent interest rate was maintained from the earlier agreements. The changes to the agreements were made in response to Jamaica's worsening economic plight. It was believed by the Washington agencies participating in Title I programming that adding a grace period and eliminating the initial payment would assist Jamaica in the near term when its financial difficulties would be most severe.

A. GOJ Request for Title I Assistance

To evaluate the impact of Title I food assistance in Jamaica, it is important to understand the underlying rationale and decisionmaking process by which the annual request for assistance was developed. This was accomplished as part of the GOJ's annual consideration of its total import budget.

Title I requests were initiated with a budget request submitted to the Bank of Jamaica by Jamaica Nutrition Holdings, Inc. (JNH), Jamaica's state importing agency for bulk grains and other foods. JNH, which imported on behalf of Jamaica's various food processors and/or wholesalers, based its annual budget request on an estimated volume of imports, estimated per unit costs, and total expenditures.

The proposed JNH budget was in turn reviewed jointly by the Bank of Jamaica, the National Planning Agency of the Ministry of Finance, and the Trade Administrator's Office within the Ministry of Industry and Commerce. Working together, these three agencies were responsible for reviewing Jamaica's total import budget and for making tentative allocations of foreign exchange among various competing sectors. In this process, three primary factors were considered--total import requirements for both food and nonfood items, estimated foreign

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exchange availabilities, and GOJ priorities for allocation of foreign exchange. From interviews with GOJ officials, priorities for foreign exchange allocations during this period appear to have been (1) debt servicing, (2) food imports, (3) energy imports, and (4) medicines and medical supplies and equipment. With respect to food imports, their review also considered estimates of local food production, substitutability of local production for imports, and estimated agricultural exports.

This annual review resulted in an estimate of the foreign exchange required to meet all necessary food imports and the foreign exchange that would tentatively be available from Jamaican sources for commercial purchases. The gap between these two estimated amounts was the basis on which the GOJ developed its requests for food assistance from all donor sources. A recommended level of Title I assistance, based on a historical share, was developed as a proportion of the total assistance requested.

Once established, that portion of the food import budget for which it was responsible was returned to JNH. JNH itself had flexibility in determining how its budget would be allocated among commodities and which commodities would be requested through Title I. Because the JNH budget would inevitably be scaled down during the review process, this flexibility was needed to enable JNH to shift available resources to purchase commodities with higher priorities. (For example, wheat flour had a higher priority than canned fish and, therefore, would be subject to a smaller reduction from JNH's original import estimate.)

The development of a Title I request for blended and fortified foods for the GOJ feeding programs was an exception to the process just described. In this case both the Ministry of Health, which is responsible for administering the maternal and child health feeding program, and the Ministry of Education, which is responsible for administering the urban and rural school lunch programs, would submit an annual budget request for these programs to the Ministry of Finance. Within the Ministry, the Project Development and Review Division² was responsible for reviewing the Ministries' budget proposals and deciding how much of the blended and fortified foods should be requested for the respective feeding programs. The Division

²In May 1979, the Division was removed from the Ministry and reorganized as a separate agency, the Project Analysis and Monitoring Co. (PAMCO). Review and coordination activities for the feeding programs do not appear to have been greatly altered by this reorganization.

also prepared project proposals on the feeding programs which were submitted to USAID/Jamaica and served a critical liaison role with JNH on matters of commodity selection and purchasing.

Once the blended/fortified foods portion of the PL 480 request had been factored in with the bulk grain portion of the request, formal submission was made to the Embassy or USAID. In earlier years of the Title I program, the submission was forwarded by the Ministry of Finance, but more recently the submission has been made by JNH itself.

To comply with international standards of "surplus disposal" adopted by the Food and Agriculture Organization's Committee on Food Aid in the late 1950s, PL 480 food assistance is designed to be "additional" to food which the recipient country would have purchased commercially under normal circumstances. In view of the manner in which the request for Title I food assistance was developed in the context of Jamaica's overall "import budget" and the perceived substitutability between commercial and concessional purchasing, there appears to be a considerable question as to whether PL 480 assistance was in fact "additional" during the late 1970s. Because food commodities were second priority for foreign exchange allocations, it appears likely that had food assistance not been available additional food imports would have been made commercially.

This appears to have occurred in FY 1978, when the negotiation and signing of the \$10 million Title I agreement was delayed until August. In May 1978, the chairman of JNH sent a letter to USAID/Jamaica noting that the GOJ had planned on PL 480 corn deliveries from May through September and that delay in signing the agreement required an "unplanned increase in commercial purchases because of Jamaica's virtually complete dependence upon imported corn."

B. Country Team Review

Upon receipt of the request for Title I food assistance, the country team, composed of USAID and Embassy staff, reviewed and analyzed its contents. Country team comments and recommendations accompanied the GOJ request when it was subsequently forwarded to Washington for interagency consideration. A review of the comments and justifications which accompanied the annual request to Washington during the period of this evaluation reveals that the country team argued a Title I program would serve the following purposes:

1. Provide balance of payment support

2. Support U.S. foreign policy objectives
3. Maintain minimum food import levels into Jamaica
4. Generate local currency to serve as counterpart for other USAID-supported projects
5. Support the GOJ feeding programs with blended and fortified foods

It is also clear from reviewing these submissions that the country team provided Washington with only a bare minimum of analysis of the underlying need for and effects of the Title I program. This is perhaps explained by the fact that the country team believed that the balance of payments and foreign policy justifications for the program were so compelling and so well understood in Washington that extensive justification and analysis were not required. On the other hand, because the PL 480 program was being coordinated within the Program Office of USAID, the staff expertise to undertake a comprehensive review may not have been available or more extensive analysis may simply not have been a priority. For whatever reason, a more thorough review and analysis of the Title I request was undoubtedly called for, given the potential negative consequences of any food assistance program, particularly for the recipient country's domestic agriculture.³

In general, a certain amount of misunderstanding accompanied the handling of PL 480 requests by the country team during the first years of the Title I program, and this in turn affected the quality of the information flowing to Washington. For example, in FY 1977, the country team recommended to Washington that a Title I program of \$15 million was justified. However, when the official GOJ request was received, only \$12.8 million of commodities were asked for. The country team inevitably had to endorse the lower volume.

Similarly, in forwarding the FY 1977 request to Washington, the country team argued that the inclusion of normal usual marketing requirements in the Title I program was "unrealistic based on Jamaica's depleted foreign exchange reserves and constricting lines of credit obtainable through commercial sources." The country team was requesting that the legislative requirements for UMRs be waived and lower commercial import

³USAID officials appear to have agreed with this point. Several noted that in reviewing the FY 1982 Title I request, the Rural Development Office and other sections of the Mission participated in the process far more actively than previously, resulting in a more thorough and substantive submission.

levels be established even prior to drawing up the negotiating instructions in Washington and determining the UMRs. In the end, after the UMRs had been calculated and explained to the country team, they concluded that UMRs would present "no problems in negotiation" and in fact had already been met by the GOJ for several of the commodities included in the agreement.

Another area where the quality of information submitted by the country team to Washington raises questions relates to the Bellmon determination. Prior to the signing of any Title I agreement, it must be certified that the importation of Title I food assistance will not have a significant disincentive impact on agricultural production and marketing in the recipient country. Information supplied by the country team is the basis on which this determination is made.

The following information was submitted by the country team for the FY 1979 agreement.

Mission is satisfied that imports of corn under the agreement will not be a disincentive to local production. Jamaica's total annual requirement is 230,000 metric tons and local production accounts for only 14,000 metric tons. Thus, the 73,000 metric tons available under this agreement constitutes only one-third of consumption requirements.

Imports of wheat flour will not be a disincentive to production as wheat is not grown in Jamaica and the annual requirement for wheat/wheat flour is 138,000 metric tons.

It is apparent from these citations that the country team viewed any possible disincentive effect of the commodities narrowly, not even exploring issues of substitution of commodities imported for those grown domestically. More important, the relevance of Jamaica's food import and production policies was not considered; as suggested in this report, the context is of overriding significance.

C. Washington Review and Approval

For the Inter-Agency Staff Committee and later the Food Aid Subcommittee Working Group, the Title I program in Jamaica was one of the most contentious issues to be considered in the interagency forum during the late 1970s. In part, this was due to the fact that a decision had been made in 1974 to phase out

all PL 480 food assistance for Jamaica. Several member agencies remained committed to that goal, believing that Jamaica's GNP per capita justified the program's phase-out. More important perhaps was the nature of the Jamaican program itself and its high foreign policy content in particular. While humanitarian, nutritional, and longer term development objectives were the basis for the Title I program in FY 1974 and FY 1975, by 1976 and in the years thereafter, the foreign policy and balance of payments justifications emerged as the primary arguments in favor of the program. Agency views on these issues differed greatly.

In FY 1976, Title I assistance for Jamaica was initially turned down by the Inter-Agency Staff Committee. Based on its per capita GNP of \$850 per year, Jamaica fell within the 25-percent category of Title I recipients, and all of the commodities in that category had already been allocated to other countries. Nevertheless, the USAID Mission and Embassy continued to argue their case, noting in part that income distribution in Jamaica was so severely skewed that per capita GNP figures were meaningless for determining food assistance allocations, congressional directives notwithstanding.

A final decision in favor of the Jamaica Title I program in FY 1976 was eventually made by the President, based on a memorandum received from the Secretary of State. While other agencies remained opposed to the program, the State Department felt compelled to raise the issue with the President. Their arguments in favor of the program were based almost totally on foreign policy grounds. In terms of meeting food needs in Jamaica during FY 1976, the program could not succeed since the agreement was not signed until the last day of the fiscal year.

Similar arguments within the Inter-Agency Staff Committee occurred again in FY 1977 and FY 1979, and in 1977 a Presidential decision in favor of the program was again required. However, that decision encompassed a range of bilateral assistance programs, Title I among them (see Appendix E). As was the case in 1976, foreign policy objectives were foremost in the arguments in favor of the program, although Jamaica's economic and balance of payments difficulties were also factored in.

Second to the basic decision on whether to approve a Title I program was disagreement within the interagency forum related to the usual marketing requirements included in all Title I programs. While the country team's concerns about the UMRs had been resolved fairly easily in FY 1977, the issue became far more intractable in 1978.

The Department of Agriculture opposed any programming of corn in the 1978 agreement. Because deliveries of corn under

the FY 1977 agreement had been delayed until 1978, USDA argued that no gap existed between Jamaica's projected consumption level and its volume of required commercial corn imports established in the UMR. In addition, USDA was concerned that with Jamaica's worsening foreign exchange situation it was unlikely that the corn UMR could be completely met in 1978. Programming of corn through PL 480 would, therefore, merely supplant required commercial sales.

Nevertheless, faced with the 1977 Presidential decision to program \$10 million of Title I food assistance to Jamaica in FY 1978 and opposed by the other agencies which favored the programming of corn, USDA relented and reduced the corn UMR from the 115,000 metric tons established in the 1977 agreement to 50,000 metric tons. This action automatically increased the gap between commercial sales and projected consumption, thereby allowing the additional corn to be programmed through Title I.

The agencies which argued in favor of lowering the UMR for corn did so for a variety of reasons, although Jamaica's balance of payments position was the primary concern. The State Department, in a memo to USDA, argued the following:

Because of Jamaica's importance to U.S. foreign policy objectives, Jamaica's perilous economic situation, and our strong desire to provide maximum support for the IMF stabilization agreement, we strongly believe that a reduction in the UMR is entirely appropriate and consistent with the U.S. Government's desire to assist Jamaica.

This argument notwithstanding, it may be debated to what extent considerations pertaining to foreign policy objectives and economic stability would affect the setting of UMRs, in the light of the language of Sections 103(c) and (n) of PL 480. In any event, it appears that in the case of Jamaica the balance of payments difficulties were so severe and food imports had been reduced so drastically from prior year levels, that it was not totally inappropriate to lower the UMR to allow necessary commodity assistance to enter the country.

While foreign policy, balance of payments, and, to an extent, development considerations were the basis for Washington approval of the Title I programs during this evaluation period, market development objectives were of little concern. This is primarily due to the fact that corn shipments were the bulk of the commodities supplied to Jamaica through the Title I program, and the United States was the exclusive supplier of this market. At best, Title I shipments of corn were a means to maintain a market during the period of Jamaica's balance of payments difficulties.

A market development justification for the program would have been more compelling had rice been included in the program. Beginning in 1975, U.S. rice suppliers had been unable to obtain import quotas for their commodity, and Jamaica began to import its rice exclusively from other CARICOM countries, primarily Guyana. For this reason, USDA recommended that 6,000 metric tons be included in the FY 1977 agreement as a means of regaining entry to the Jamaican market. However, during third-country consultations on the proposed agreement, Guyana and other members of CARICOM objected so strenuously to this arrangement that rice was eliminated from the commodity composition.

In the case of wheat and wheat flour, a limited market development justification for the program also existed. Canada was a competing supplier of wheat to Jamaica, and several European countries were competitors in wheat flour sales. After 1977, however, neither of these commodities exceeded 5,000 metric tons in any of the Title I agreements. In December 1978, the GOJ signed a three-year credit arrangement with the Canadian Wheat Board for the supply of wheat and flour which precluded any sizable programming of either commodity in the Title I agreements.

D. Negotiating Procedures

Once negotiating instructions for the Title I agreements were received from Washington, negotiations would proceed in Kingston between USAID/Embassy representatives and GOJ representatives. The latter were led by Ministry of Finance officials, but with representatives from JNH and the Trade Administrator's Office also in attendance. The agreement itself was signed on behalf of the GOJ by the Minister of Finance in accordance with Jamaican law. The significance of these procedures for agreement negotiation arises from the absence of representatives from the Ministries which would be responsible for implementing the self-help measures and for utilizing the counterpart funds. In discussions with officials of these Ministries it appeared that no procedures existed to allow them to make recommendations on the self-help measures prior to their being negotiated. Moreover, it was left to the Ministry of Finance to notify the implementing Ministries of the terms of the Title I agreement and their responsibilities for implementing the self-help measures. Communication concerning these items appears to have been haphazard at best. As a result, implementation of self-help measures was not as successful as it might have been. (See Appendix F for additional details.)

II. PL 480 TITLE I PROGRAM OPERATION IN JAMAICA

A. Importing of Title I Commodities

Since 1977, the importation of Title I commodities into Jamaica has been implemented by the state trading corporation, Jamaica Nutrition Holdings, Ltd. (JNH).^{4,5} JNH was established by the GOJ in 1974 in part to achieve foreign exchange savings through consolidated purchasing of food commodities overseas and to gain access to government-to-government credit. Another factor contributing to its establishment was a dispute between the Government and Jamaica Flour Mills, Jamaica's only flour miller. Jamaica Flour Mills suspended operations in 1973, claiming that its operations were not profitable due to Government price controls which were keeping the price of flour too low. The GOJ responded by organizing JNH and assuming all responsibility for wheat and other grain imports. In this manner the Government could absorb a portion of the cost of wheat, guarantee the miller a fixed profit within the confines of price controls, and assure a low retail price of flour for the general public. This arrangement continues to the present with JNH retaining its pivotal role in the GOJ's price control system for foods. (See following section.)

With one or two exceptions, JNH's procedures for the importation of Title I commodities do not appear to have differed significantly from those for commercial sales. Title I shipments were factored in with the scheduling of all other imports.

One of these exceptions was in the handling of receipts for Title I commodities. After selling the commodities to either Jamaican processors or wholesalers, JNH was responsible for depositing the counterpart generations into the Title I account at the Bank of Jamaica.

⁴Importation of the blended and fortified foods shipped under the Title I programs from FY 1974 to FY 1976 was the responsibility of Central Foods Organization. With the expansion of the program in 1977 to include bulk grains and increased vegetable oil, JNH assumed responsibility for all Title I imports.

⁵Jamaica Nutrition Holdings later became a subsidiary of Jamaica State Trading Corporation when other subsidiaries were organized to handle importation of construction equipment and medical supplies. In October 1981, all of these agencies were reorganized into one entity, Jamaica Commodity Trading Company, Ltd.

Another exception to regular commercial procedures involved shipping procedures as a result of the U.S. Cargo Preference Act and its requirement that 50 percent of all PL 480 commodities be shipped on privately owned U.S. flag vessels. In interviews during this evaluation with Jamaican officials involved in Title I importing, considerable displeasure was expressed concerning this requirement and its negative ramifications for Jamaica. The complaints stem primarily from the fact that U.S. flag vessels are larger than those normally used in Jamaica's commercial importing. Because of their size, U.S. flag vessels cannot be easily accommodated at Jamaican ports, and JNH's flexibility in its importing operations is reduced. For example, in the case of shipment of #3 corn, the only port capable of handling large ships is Port Esquivel on the south coast. This removed JNH flexibility to designate the shipment to unload at any one of three ports, depending upon the stock positions of the recipient processors. Moreover, since Port Esquivel is primarily a bauxite loading port, ships receiving bauxite have priority at berth. As a result, the discharge of corn could be delayed considerably, resulting in the accumulation of sizable demurrage charges. In 1980, a JNH official noted, a single vessel once accumulated demurrage charges of \$200,000 while waiting to discharge its Title I cargo at Port Esquivel.

Large-scale U.S. vessels also present difficulties to JNH because of limited storage capacity for grains within Jamaica. It was noted that a vessel of this size may be required to wait in port until sufficient storage space becomes available.

It is difficult to document the exact extent to which demurrage charges have plagued JNH's importing of Title I commodities because these matters are usually handled directly between JNH and the shipper, without U.S. Government involvement. In one instance, however, a demurrage charge of \$125,295 for Title I freight was documented because the vessel owner appealed to USDA for assistance in receiving payment.

JNH has sought to accommodate U.S. vessels to the extent possible and in some instances has sought a waiver of the cargo preference requirement to avoid having to use large U.S. vessels. USDA has authorized such waivers in special circumstances but is limited by Maritime Administration regulations in its ability to do so. To the extent that Jamaican requirements could not be met and demurrage charges have resulted, the value of Title I assistance for Jamaica has clearly been diminished.

The limited availability of storage facilities is another problem which has plagued JNH in its importation of Title I commodities.⁶ Limited storage does not in fact have to be a

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problem, provided the Title I agreement is signed early in the fiscal year so commodity shipments can be scheduled to arrive at appropriate intervals. In the case of Jamaica, because of the extent of disagreement over the merits of the program in Washington and the resulting delays in authorizing negotiations, late signing of the agreements has been the rule rather than the exception.

These delays have resulted in commodities being scheduled for shipment over a shorter period of time, thereby taxing Jamaica's storage facilities or, more commonly, requiring extensions of the terminal shipping dates through amendments to the agreements. Such amendments were required for the FY 1975, 1977, and 1978 agreements. Extensions of this nature are troublesome because they disrupt the following year's programming and reduce flexibility in commodity selection. Because FY 1977 corn deliveries extended into 1978, the usual marketing requirement for corn had to be reduced to allow corn to be programmed in 1978. Beginning with the 1980 agreement, Title I signings have come earlier in the year, thereby obviating the need for agreement amendments and presumably also avoiding any overburdening of storage facilities in Jamaica.

B. Processing, Distribution, and Utilization⁷

JNH's responsibility for handling PL 480 Title I commodities is limited to that of importation. Once the commodities have arrived in port, JNH sells them (excluding the blended and fortified foods) to various processors or wholesalers. This arrangement is followed for commercial imports as well.

Coordination between JNH and the recipient processors and wholesalers has not always been smooth. During the first years of its operations, JNH had sufficient scheduling difficulties that it could not always assure that adequate supplies of commodities would be available for Jamaica's processors and distributors. An official of Jamaica Grains and Cereals, a cornmeal manufacturer, noted that during those years the processing

⁶A 1980 cable from Kingston listed available storage capacity as follows: corn, 19,950 metric tons; wheat and flour, 21,150 metric tons; vegetable oil, 1,450 metric tons; blended fortified foods, 4,360 metric tons.

⁷Information for this section came from interviews in Jamaica and was supplemented by routine reports filed by the U.S. Agricultural Attache, the Annual Grain and Feed Reports in particular.

plant had to suspend operations at times because of a lack of corn received from JNH. He did note, however, that by 1980, relations with JNH had improved markedly and problems as severe as that were no longer being experienced. While Jamaica Grains and Cereals' problems were not solely the fault of JNH, others have also noted problems stemming from JNH's inexperience. A 1978 report by the U.S. agricultural attache observed:

Jamaica Nutrition Holdings, the government agency in charge of maintaining adequate supplies of wheat and feedgrains in Jamaica, seems to be coming to terms with the many problems of managing and regulating this sector of the economy.

PL 480 Title I commodities were undoubtedly not immune from these types of difficulties. However, Title I commodities by their very nature did serve to improve relations between JNH and the processors. Representatives of both noted that the assurance of supply provided by a Title I agreement helped to relieve the uncertainty surrounding commercial purchases, an uncertainty magnified during a period of foreign exchange shortages. And to the extent that the Title I agreement was signed earlier in the U.S. fiscal year, the assurance of supply was that much greater, and hence the Title I commodities were that much more highly valued by all concerned.

The 263,000 metric tons of Title I corn shipped to Jamaica during the period of this evaluation constituted 80 percent of total PL 480 tonnage (see Table D-2). As Jamaica's foreign exchange situation worsened during this period and commercial imports were reduced, the Title I corn assumed an ever larger proportion of total corn imports and total supply. This trend peaked during the 1979/1980 period (July to June annual basis) when Title I shipments constituted 57.1 percent of total imports and 1.5 percent of total supply. As restrictions on imports were eased in late 1980 and early 1981, commercial corn imports rebounded to levels more consistent with those prior to 1977, resulting in a sharp decline in Title I imports as a proportion of both imports and supply.

Data available from USDA on Jamaica's domestic production of corn show large year-to-year variations, with increases in

Table D-2. Jamaica Corn Supply Situation
(1,000 metric tons)

	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81 ¹
<u>Stocks</u>	0	10.0	10.0	10.0	10.0	5.0	1.0
<u>Domestic Production</u>	10.0	11.0	Neg.	6.0	15.0	14.0	7.0
<u>Imports</u>							
<u>Commercial</u>							
U.S.	106.0	117.0	157.7	120.2	69.1	63.6	153.6
Non-U.S.	0	0	0	0	0	0	0
<u>Concessional</u>							
PL 480	0	0	1.3	77.8	87.9	98.4	10.4
Non-U.S.	0	0	0	0	0	0	0
<u>Total Imports</u>	106.0	117.0	159.0	198.0	157.0	162.0	164.0
<u>Total Supply</u>	116.0	138.0	169.0	214.0	182.0	181.0	172.0
PL 480 as % of Total Imports	0	0	1.0	39.3	56.0	60.7	6.3
PL 480 as % of Total Supply	0	0	1.0	36.4	48.3	54.4	6.0

¹July/June annual basis.

Source: Grain and Feed Division/Foreign Agricultural Service/USDA.

1978-1980, and declines thereafter.⁸ With reference to the apparent decline, there has been some concern expressed that Title I imports were creating a direct disincentive to local production. In the view of former U.S. agricultural attaches, this would not appear to be the case, however, as corn acreage harvested appears to have remained stable. Therefore, the decline in domestic production was probably attributable to reduced yields resulting from the usual vagaries of agricultural production (e.g., weather patterns or lack of inputs) or, equally important, to the diversion of domestic production to the "green market" for human consumption as corn on the cob. Corn marketed in this manner is generally not reflected in production data which is derived in part from commercial sources.

Approximately 75 to 80 percent of the Title I corn has been #3 grade, which is used in the manufacture of animal feed. The rapid expansion of feed production in Jamaica has accounted for the dramatic increase in annual corn imports since the 1960s--from 13,000 metric tons in 1961/1962 to 164,000 tons in 1980/1981. During this period the GOJ pursued an import-substitution strategy for meat production, attempting both to enhance self-reliance and to reduce the level of foreign exchange expenditures for imported chicken, beef, and pork. Development of the poultry and livestock sector has also been promoted as a means to generate income and create employment in rural areas.

Three processors utilize #3 corn for the manufacture of animal feed in Jamaica (a fourth suspended operation in the late 1970s). Their 1980 feed production is estimated as follows:

Master Blend (Central Soya)	115,245 mt
Caribbean Milling	63,521 mt
Jamaica Feeds (Seprod) ⁹	<u>51,724 mt</u>
	230,490 mt

⁸IBRD Report No. 3781-JM, 1/29/82, relying on GOJ data, shows a gradual and steady decline in production from 1975, however. We were not able to reconcile the data difference, but as our analysis suggests, they are not material to analysis of the fundamental disincentives issue in the Jamaican context.

⁹Jamaica Feeds is a subsidiary of the holding company, Seprod. According to a Seprod official, the organization was once owned exclusively by a national association of copra producers. Today, five members of the Seprod board of directors are copra producers selected by the Coconut Industry Board, and four members, including the chairman, are appointed by the GOJ.

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Animal feed is sold at both the wholesale and retail level at controlled prices. This policy is intended to encourage additional livestock production, particularly among smaller farmers by guaranteeing access to manufactured feed, and is also designed to keep the cost of meat, particularly chicken, low for Jamaican consumers.

Chicken production is particularly important for the Jamaican diet, as chicken is the second largest source of protein. Moreover, among lower income groups in both rural and urban areas, chicken necks and backs are the most widely consumed meat. Chicken production and the availability of poultry feed are also important for Jamaica's small farmers. It is estimated that during 1980, 24 percent of all broiler production originated on small farms. Total broiler production estimates for the year are presented in Table D-3.

Both Jamaica Broilers and Caribbean Broilers are contract producers who provide services to farmers such as veterinary assistance and guaranties on commercial bank loans in return for the farmers' raising broilers to be marketed exclusively by them. Thus, a large number of small-scale farmers participate in broiler production in addition to the 24 percent, indicated in Table D-3, who are unaffiliated.

Table D-3. Estimated 1980 Broiler Production

Company	Amount (million pounds)	% of Total Production
Jamaica Broilers	37.0	55
Caribbean Broilers	10.5	16
Eagle Farms	3.7	6
Unaffiliated Small Farms	<u>16.0</u>	<u>24</u>
Total	67.2	101 ¹

¹Total does not equal 100 because of rounding.

In the limited time available to the study team, the viability and economic impact of the GOJ's policy to promote the development of a domestic poultry industry through, inter alia, subsidized imported inputs, could not be analyzed. However, Jamaican officials stressed the high cost of imported frozen chicken, and the nutritional significance of this commodity, i.e., a principal protein source.

The remaining Title I corn imported by Jamaica has been #2 grade, used in the manufacture of cornmeal and grits. These are produced in Kingston by Jamaica Grains and Cereals, Ltd., also a division of Seprod. Production estimates for 1980 are shown in Table D-4.

Cornmeal is produced and retailed in one of three grade qualities. The highest quality is a degermed variety distributed and retailed in 1- or 2-pound packages under five separate brand names. The second quality cornmeal is partially degermed and semi-packaged for retail, also in 1- or 2-pound packages. The third quality variety is not degermed and is distributed in 50-pound bags. Stores purchase this latter variety in bulk and resell it in smaller, usually 1- or 2-pound unmarked bags. It has been estimated that 95 percent of cornmeal sales are of the third quality variety, with the first and second qualities constituting the remaining 5 percent of sales.

Table D-4. Estimated 1980 Production
of Cornmeal and Grits

Product	Amount (metric tons)	% of Total Production
Cornmeal	20,000	82
Brewers Grits	3,473	14
Bakers Grits	<u>908</u>	<u>4</u>
Total	24,381	100

An official of Seprod noted that prior to 1980 his company handled distribution of the cornmeal throughout Jamaica. However, in response to complaints that insufficient quantities were reaching rural areas, Seprod altered its policy and now sells to wholesalers who in turn make distribution throughout the island.

Cornmeal is consumed predominately among lower income groups in Jamaica, most frequently in the form of porridge. Several individuals interviewed for the evaluation noted that among higher income groups, cornmeal is considered an "inferior good" and consumed only sparingly.

The PL 480 Title I wheat and wheat flour imports shipped during the period of this evaluation--33,400 metric tons, or 10 percent of total Title I tonnage--did not match the

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contribution of PL 480 corn imports in terms of total imports or supply. In general, the Title I wheat and flour were not greater than 10 percent of total annual imports, with the exception of 1977/1978 when they achieved 21.7 percent (see Table D-5). As previously noted, Jamaica signed a three-year supply agreement with the Canadian Wheat Board in December 1978 which provided both wheat and flour on three-year credit. With that agreement it became most advantageous for Jamaica to use Canadian credit for wheat and flour imports, reserving most PL 480 concessional financing for corn.

Table D-5. Jamaica Wheat/Wheat Flour Imports¹
(1,000 metric tons)

	1975/76	1976/77	1977/78	1978/79	1979/80	1980/81 ²
<u>Commercial Imports</u>						
U.S.	73.0	53.0	56.0	53.0	24.0	14.7
Non-U.S.	75.0	79.0	60.0	118.0	102.0	121.5
<u>Concessional Imports</u>						
PL 480	3.0	6.0	34.0	2.0	13.0	205.
Non-U.S.	0	0	7.0	0	1.5	.8
<u>Total Imports</u>	151.0	138.0	157.0	173.0	140.5	157.5
PL 480 as % of Total Imports	2.0	4.3	21.7	1.2	9.3	13.0

Source: International Wheat Council Statistics.

¹Jamaica produces no wheat so production statistics are not included in this table.

²July/June annual basis.

Title I agreements generally provide some flexibility in the relative proportions of wheat and flour which are eventually purchased by the recipient country. In the case of Jamaica, the GOJ sought Commodity Credit Corporation financing of \$1,035,000 for wheat and \$4,965,000 for wheat flour, from the total \$6,000,000 provided in the Title I agreements.

Wheat imported by JNH is sold to Jamaica Flour Mills, Jamaica's only flour mill, owned jointly by the GOJ and Pillsbury.¹⁰ The mill produces either counter flour, which is marketed through retail outlets to consumers, or baking flour, which is used in commercial bakeries. Distribution of the mill's flour to retailers and the island's 183 bakeries is handled by nine distributors who purchase it from Jamaica Flour Mills on a percentage-share basis.

All of the Title I wheat flour supplied during this period has been counter flour, which JNH sells directly to distributors. Counter flour is consumed in large part by lower income groups in dumplings, fried pastries, and gravies. Baking flour, on the other hand, is consumed as sliced bread, buns, soft bread, and "hard dough." Counted together, wheat flour products in all their forms and uses constitute the single largest source of protein in the Jamaican diet.

The 4,900 metric tons of Title I soybean oil imported by JNH during the evaluation period represented only 1 percent of total Title I shipments to Jamaica and constituted only 6 to 7 percent of total Jamaican vegetable oil and soybean imports on an oil-equivalent basis (see Table D-6). Despite these modest amounts, the Title I soybean oil has served a useful role in protecting against fluctuations in domestic vegetable oil production and in helping to subsidize Jamaica's own production of soybean oil.

JNH sells the Title I soybean oil, imported in bulk, to Caribbean Products, a division of Seprod, which undertakes any further refining that might be required and bottles the oil for local retail sale. An official of Seprod noted that the Title I vegetable oil was valued by his company for both its high quality and its assurance of supply. He noted in comparison that soybean oil which Seprod received from in-country production by Jamaica Soya Products had neither of these two advantages.

¹⁰After the suspension of operations by Jamaica Flour Mills in 1973, which contributed in part to the formation of JNH, the GOJ purchased all equity in the company owned by Jamaicans. Pillsbury retained its partial ownership.

Table D-6. Jamaica Edible Vegetable Oil Supply Situation
(1,000 metric tons)

	1977	1978	1979	1980 ¹
<u>Domestic Production</u>				
Coconut Oil	13.0	14.0	17.0	17.0
<u>Imports</u>				
Commercial				
Soybeans (Oil Equivalent)	6.0	8.0	10.0	13.0
Soybean Oil	5.0	3.0	4.0	2.0
Coconut Oil	3.0	2.0	2.0	1.0
Concessional				
PL 480	1.0	Neg.	1.0	1.0
Total Imports	15.0	13.0	17.0	17.0
<u>Total Supply</u>	28.0	27.0	34.0	34.0
PL 480 as % of Total Imports	6.7	Neg.	5.9	5.9
PL 480 as % of Total Supply	3.6	Neg.	2.9	2.9

¹Calendar-year basis.

Source Oilseeds and Products Division/Foreign Agricultural Service/USDA.

Among the Jamaican population, soybean oil retailed in bottles is purchased and consumed primarily by higher income groups. Lower income groups generally consume locally produced coconut oil.

Distribution within Jamaica of Title I commodities or their products (with the exception of the blended and fortified foods) is not targetted through special programs at any particular income or consumer group. Rather, the PL 480 commodities are comingled with all similar foods and marketed through normal retail channels. The same is true with respect to geographical distribution, with no distinction made between urban and rural marketing. Given the relatively small size of the

island, distribution and retailing of the commodities in the rural areas do not appear to have been critical problems.

All Title I commodities which have been marketed within Jamaica have been subject to the GOJ's system of subsidies and price controls, the stated purpose of which is to keep essential foods affordable for lower income groups and, in the case of animal feed, to encourage local poultry and livestock production. As previously noted, one of the factors contributing to the formation of JNH was the desire of the GOJ to keep the resale price of commodities for Jamaica's processors and wholesalers low relative to their imported cost. JNH continues to perform this function today.

Information received from the USAID Mission shows that #2 corn imported for cornmeal processing is discounted by JNH at approximately 36 percent from the c.i.f. cost when sold to Jamaica Grains and Cereals. Similarly, baking flour is discounted 3 percent and counter flour, 8 percent. By contrast, imported soybean oil is resold to Caribbean Products at a price 47 percent higher than the c.i.f. import cost. The profit thereby obtained is used to subsidize the merchandising of soybean meal and oil produced locally by Jamaica Soya Products.

An official of Jamaica Commodity Trading (successor to JNH) noted that the losses suffered by JNH from these subsidies are restored from normal pricing margins on other commodities or from savings realized when world market prices drop below budget estimates. In addition, the GOJ has supported the food subsidies and price controls with its own budget resources and has presumably reimbursed JNH for its losses. A March 1979 cable from USAID/Kingston noted that in 1979, the GOJ was planning to provide J\$50 million for subsidies. Table D-7 shows percentage allocations of subsidies during the first half of 1979. PL 480 Title I commodities have provided JNH with one obvious advantage in its subsidization activities: no "losses" are experienced when they are resold to Jamaican processors and distributors. Rather, the Title I counterpart is deposited with the Bank of Jamaica, and it is the Bank of Jamaica which will later repay the Commodity Credit Corporation, so the loss will be absorbed there.

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Table D-7. Percentage Allocations of Subsidies,
First Half of 1979

Commodity	% Allocation
Soybean Meal and Oil	37.14
Wheat	22.41
#2 Corn	11.39
Counter Flour	9.42
Chicken Necks and Backs	6.80
Sardines	3.72
Rice	2.66
Skim Milk Powder	2.38
Biscuit Flour	1.80
Butter Oil	1.78
Buttermilk Powder	1.50

For commodities deemed essential, including all those supplied through Title I, price controls are applied at each stage of production and distribution. This is intended to guarantee a prescribed profit margin at each stage while also holding final retail prices as low as possible. Table D-8 is a partial listing of price controls at selected stages of production for Title I commodities as of February 1979. Exhibit D.1 is a published list of the controlled prices at the retail level.

The remaining portion of the Title I commodities, the blended and fortified foods, are consigned directly to Central Foods Organization (CFO), a GOJ agency responsible for the foods' handling and storage. CFO maintains two warehouses in Kingston for storage of these commodities. It is from these locations that the foods are distributed to the three feeding programs on request of their implementing agencies.

The commodities used in the urban school feeding program (Kingston and St. Andrew corporate area) sponsored by the Ministry of Education are processed by Nutrition Products, Ltd. (NPL). NPL is a Government-owned company, operating under an annual grant from the GOJ. It is located next to CFO in Kingston and has storage capacity in its own building as well as in CFO's.

Table D-8. Partial List of Production Price Controls
for Title I Commodities as of February 1979
(U.S. dollars)

Commodity	Ex-factory	Distribution	Wholesale	Retail
Cornmeal				
50 lb.	4.61	NA	4.95	-
1 lb.	-	-	-	.12
Refined Soybean Oil				
4 U.S. gal.	18.33	19.43	20.22	-
1 U.S. gal.	-	-	-	5.53
Counter Flour				
100 lb.	NA	12.23	12.98	-
1 lb.	-	-	-	.15
Chick Starter (animal feed)				
50 lb.	5.34	NA	5.75	5.91

In its operations, NPL has utilized soy-fortified products to make vegetable patties and, more recently, nutribuns and spice cakes for daily distribution to public schools in the corporate area. These baked goods have been supplemented with milk, reconstituted from nonfat dry milk received through an annual European Community grant.

The rural school feeding program is administered directly by the Ministry of Education. Commodities received from CFO are stored in one of three warehouses operated by the Ministry--Kingston (Pechon Street), Falmouth (Trelawny parish), and Greyhound (Manchester parish). Food is distributed from these warehouses once per term to the participating schools. The Title I commodities are used in hot school lunches, generally as supplements to locally procured foods.

The maternal and child health feeding program is the responsibility of the Nutrition Department within the Ministry of Health. The Ministry maintains two facilities in Kingston where the Title I foods are repackaged in 2-pound plastic bags--Nutrition Packaging Ltd. and the Child Feeding Service Center. Three additional storage facilities are maintained outside the Kingston corporate area--Montego Bay, Port Antonio, and Williamsfield (Manchester parish). From these locations,

Exhibit D-1: Controlled Prices (Daily Gleaner, January 8, 1982)

ARTICLES		MAXIMUM RETAIL SELLING PRICE	
BEEF (Canned in tin)			
BEEF (Canned in tin)	12 oz tin	\$3.00 per tin	
BISCUITS (Locally Manufactured)			
Water Crackers	6 oz pkt.	5 1/2¢ per packet	
Water Crackers	14 oz pkt.	\$1.22 per packet	
BREAD			
Hardough (All Brands)		70¢ per lb.	
Blond and non-blond (White) not less than 12 oz but not more than 16oz (All Brands)		67¢ per lb.	
Blond and non-blond (White) 17oz (All Brands)		68¢ per lb.	
Blond and non-blond (Brown) not less than 20 oz but not more than 24 oz (All Brands)		64¢ per lb.	
Blond and non-blond (Brown) not less than 12 oz but not more than 16 oz (All Brands)		66¢ per lb.	
Blond and non-blond (Brown) not less than 20 oz but not more than 24 oz (All Brands)		66¢ per lb.	
CHICKEN - Neck & Bones			
Chicken - Neck and Bones		60¢ per lb.	
COOKING OIL			
Gourmet Soybean Puritan	32 oz bottle	\$2.50 per bottle	
	16 oz bottle	\$1.25 per bottle	
	4-1 LB gal. bottle	\$12.43 per bottle	
	26 oz bottle	\$4.00 per bottle	
CORNMEAL			
Cornmeal (Imported) "Golden Olet" Brand	1 1/2 lb. pkt.	26¢ per lb.	
Cornmeal "Golden Olet" Brand	1 1/2 lb. pkt.	\$1.21 per packet	
FISH			
FISH (Dried, Salted, Unsmoked) (Imported & Locally produced)		\$2.50 per lb.	
HERRINGS (Canned)			
"Suzanne" Brand	3 1/2 oz tin	60¢ per tin	
Other Brands	3 1/2 oz tin	62¢ per tin	
Other Brands (240gm.)	12 oz tin	\$1.50 per tin	
Other Brands (240gm.)	14.7 oz tin	\$2.00 per tin	
MACKEREL (Canned)			
Mackeral	5.5 oz tin	52¢ per tin	
Mackeral	7.5 oz tin	58¢ per tin	
Mackeral	10 oz tin	\$1.20 per tin	
SARDINES (Canned)			
"Suzanne" Brand	3.25 oz tin	60¢ per tin	
Other Brands	3.25 oz tin	62¢ per tin	
"Suzanne" Brand	4.4 oz tin	71¢ per tin	
Other Brands	4.4 oz tin	\$1.12 per tin	
Other Brands	140gm. tin	47¢ per tin	
Other Brands	120gm. tin	47¢ per tin	
FLOUR (Counter)			
Flour (Soft)		45¢ per lb.	
GASOLINE (MOTOR PETROL)			
Premium Motor Petrol (90 R.O.N.)		\$4.65 per Imperial gallon	
Regular Motor Petrol (87 R.O.N.)		\$4.50 per Imperial gallon	
GAS OIL			
		\$2.90 per Imperial gallon	
INFANT FOODS (IMPORTED)			
BMA	140gm/10oz	\$4.53 per tin	
Lactogen STD	1 lb. (454gm) tin	\$4.20 per tin	
Lactogen	2 1/2 lb. (1130gm) tin	\$10.10 per tin	
Skim	1 lb. tin	\$5.20 per tin	
Other Milk	140gm/10oz	\$2.50 per tin	
Other Milk	140gm/10oz	\$4.70 per tin	
Other Milk	140gm/10oz	\$4.77 per tin	
Other Milk	140gm/10oz	\$2.61 per tin	
KEROSENE OIL			
Within Urban Areas		\$2.50 per Imperial gallon	
		22¢ per Imperial pint	
Within Other Areas		\$2.67 per Imperial gallon	
		23¢ per Imperial pint	

ARTICLES		MAXIMUM RETAIL SELLING PRICE	
MILK PRODUCTS			
Milk (Canned, Sweetened, Condensed)	14 oz tin	52¢ per tin	
"Nestle" Brand	14 oz tin	55¢ per tin	
Milk (Canned, Unsweetened, Evaporated)	14 oz tin	52¢ per tin	
"Oscar" Brand	14 oz tin	52¢ per tin	
RICE			
Rice (White) Boro		70¢ per lb.	
Rice (Polished) 1 lb. packet		70¢ per packet	
SKIM MILK POWDER			
		52¢ per lb.	
SOAPS			
HOUSEHOLD SOAPS			
Magic, Cannon, Golden Gold	7 oz tablets	55¢ per tablet	
Domest Laundry Soap	8 oz tablets	55¢ per tablet	
UNWRAPPED SOAPS			
Household Soap	7 oz tablets	52¢ per tablet	
Magic/Cannon			
TOILET SOAPS (WRAPPED)			
Oral/Carta Corbelle	2 oz tablets	32¢ per tablet	
	3 oz tablets	40¢ per tablet	
Milbon, Capelle	2 1/2 oz tablets	44¢ per tablet	
	3 1/2 oz tablets	51¢ per tablet	
	4 1/2 oz tablets	57¢ per tablet	
Softek in Baby Soap	2 1/2 oz tablets	48¢ per tablet	
Johnson's Baby Soap	2 1/2 oz tablets	48¢ per tablet	
Palmolive	2 1/2 oz tablets	42¢ per tablet	
	3 1/2 oz tablets	42¢ per tablet	
	4 1/2 oz tablets	42¢ per tablet	
Palmolive	2 1/2 oz tablets	42¢ per tablet	
	3 1/2 oz tablets	42¢ per tablet	
	4 1/2 oz tablets	42¢ per tablet	
	5 oz tablets	42¢ per tablet	
	6 oz tablets	42¢ per tablet	
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distribution of the blended and fortified foods is made to the 250 health clinics throughout the island which participate in the MCH program.

The blended and fortified foods which have been supplied through Title I are soy-fortified wheat flour, soy-fortified bulgur, soy-fortified cornmeal, wheat-soy blend, and corn-soy blend. In recent years, wheat-soy blend has not been purchased as it was not widely accepted among program participants.

The blended and fortified foods component of the Title I program has been plagued by a number of administrative and operational problems which have impaired its effectiveness. One problem has undoubtedly been the plethora of organizations involved in the planning and administration of the programs, resulting in problems of coordination and implementation.

For example, coordination of importing schedules between JNH and CFO has not been adequate. In 1979, a new provision had to be added to the invitation for bids issued in Washington for the blended and fortified foods, requiring that the commodity suppliers send to CFO and JNH in Kingston two copies of the commercial invoice, bills of lading, and port inspection certificates. This change was adopted in an "attempt to resolve continuing problems of CFO's lack of advance notice of [the] arrival of blended/fortified foods." The problem of coordination in this case is further compounded by the fact that CFO is responsible for storage and internal handling, but another GOJ agency, PAMCO, advises JNH on purchasing and shipping.

A further problem for the blended and fortified foods component of the program relates to the timing of the Title I agreements and shipping and arrival periods. It was emphasized during interviews in Jamaica that when the Title I agreement was signed late in the U.S. fiscal year, an urgency developed to import the commodities in a shorter period of time than would be preferred.

The compressed purchasing and delivery period in turn created pressure in Jamaica to distribute commodities through the feeding programs faster than would normally be the case. As a result, heavy distribution of the commodities would follow delivery of the commodities, with supplies being exhausted before the next shipment of blended and fortified foods was received from the United States. The urgency to distribute the commodities resulted in large part from the nature of the commodities themselves. Soy-fortified foods in particular are subject to spoilage and insect infestation during prolonged storage periods. Knowing of this possibility, program administrators have preferred to increase distribution rather than risk losing the commodities altogether.

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Generally, these foods have arrived in Jamaica in two shipments in March/April and August. PAMCO has recommended receiving the commodities in three shipments--March, August, and December--to avoid spoilage and infestation problems and to ensure a more regulated distribution of the commodities. To date, this has not been accomplished. (The feeding programs of the GOJ and the use of blended/fortified foods are discussed further in Appendix I.)

III. FINDINGS AND RECOMMENDATIONS

This overview of the PL 480 Title I process in Jamaica is intended to explore those "impacts" of the program that result from the very nature of its character and operations. The following are the most important to be gleaned from this review.

A. Assurance of Supply

In terms of Jamaica's food "import budget," the Title I commodities undoubtedly made a positive contribution, helping to close the gap between necessary imports and constrained foreign exchange availabilities.

An even greater benefit derived from the Title I program, perhaps, was the assurance of supply it offered to JNH and Jamaica's processors and wholesalers. This theme was stressed repeatedly in interviews with officials who noted that in a period of great uncertainty for commercial imports of all kinds, the assurance of Title I commodities did much to alleviate their concerns and offered the prospect of uninterrupted business operations. Based on these reactions, it appears that Title I commodities assumed an importance well beyond their contribution to either total imports or total supply.

B. Country Team Submission

The country team submission to Washington of Jamaica's request for food assistance and the accompanying analysis and recommendations were found to be lacking in several respects. In fairness to the Embassy and USAID/Kingston, it should be noted that submissions from other Title I recipient countries are at times similarly lacking. Yet in many instances, these submissions support longstanding programs where the need is well documented and the Title I contribution well understood. This was not the case in 1977 and the first several years

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thereafter, when the proposed larger Title I program was new for Jamaica. In part, much of the interagency wrangling in Washington over the merits of the program stemmed from differing interpretations of its intended objectives and benefits.

The FY 1982 country team submission for the Title I program was considerably more thorough in exploring the effects and benefits of the program for Jamaica. This improvement is particularly helpful at this time because of the partial easing of Jamaica's balance of payments problems and the return to more traditional levels of commercial importing. With the balance of payments justification for the program somewhat diminished, Washington agencies need to be better informed as to the program's other objectives and contributions.

A review of the impact of Title I assistance on Jamaican agricultural production and marketing is particularly needed. With the resumption of large-scale food importing, there is considerable concern within the country that Jamaican farmers are having difficulty marketing their own products. A thorough review of the situation should be undertaken; also, a more comprehensive approach to the Bellmon disincentive determination by the country team is required.

C. Agreement Timing

Signing of Title I agreements late in the U.S. fiscal year has been a source of considerable dissatisfaction for Jamaican officials involved in PL 480 operations. In recent years, the programs have been signed earlier, and this improvement should be continued. Washington agencies, in particular, should be committed to having the program authorized and signed by the end of the second quarter of the fiscal year, if not sooner.

Early signing offers a number of advantages: the assurance of commodity supplies is greater; counterpart funds are generated sooner with earlier deposits into the Title I special account; storage problems are alleviated to the extent that imports can be scheduled over a longer period of time and in smaller shipments; and the blended/fortified foods can be distributed more evenly without the need to import quickly before the end of the fiscal year. In this regard, new obligating procedures adopted for the Title I program as a result of annual program limitations mandated by the Budget Control and Impoundment Act of 1974 require that all commodities be purchased with delivery dates at U.S. port prior to the end of the U.S. fiscal year. These procedures make it more difficult to amend agreements to extend purchasing and delivery periods as these late purchases become obligations against the next year's program ceiling and budget. It becomes even more

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important, therefore, for Jamaica's agreement to be signed early, since agreement amendments similar to those authorized in previous years will no longer be readily approved.

If the blended/fortified foods portion of the programs is continued, it is recommended that the program be adapted to allow deliveries three times a year as suggested by PAMCO. This would help to avoid the problems of spoilage and uneven distribution which have been encountered by the feeding programs in previous years. One means to allow for a first delivery of the commodities in December (with others in March and August) would be to separate the blended/fortified foods component of the agreement and authorize their purchase through an amendment to the previous year's Title I agreement. The remaining (larger) portion of that year's allocation could follow as a separate agreement with negotiation of all terms (financial, self-help, commodity composition, etc.). Alternatively, a calendar-year agreement could also allow for delivery of blended/fortified foods in December, although this alternative is not as attractive due to the Title I obligating procedures.

D. Commodity Composition

The commodities supplied through the Title I program do not by themselves appear to have had any long-term, negative consequences for Jamaica. In general, the bulk commodities comply with consumption and utilization patterns which had developed well in advance of their financing through PL 480. Moreover, Jamaica Nutrition Holdings was able to exercise flexibility in its selection of commodities for the Title I request, thereby taking full advantage of available credit--i.e., relying on Title I concessionality for corn imports which were imported exclusively from the United States and using Canadian credit for wheat and wheat flour. Market development objectives of the U.S. Government appear to have had little bearing on the commodity composition of the program.

Several Jamaican officials did note that the blended and fortified foods were not universally accepted in the feeding programs, although the GOJ has not suggested they be removed from the program. A representative of Jamaica Grains and Cereals did note that his company was considering the manufacture of soy-fortified cornmeal.

In the past, the country team in Jamaica has advised that a potential for commercial sales of blended and fortified foods existed in the country. This assertion became the basis for the GOJ to qualify for a waiver of the costs of processing, enrichment, and fortification of these commodities, authorized by Section 114 of the PL 480 Act. No interest in commercial imports of these commodities was found.

E. Cargo Preference

The application of cargo preference requiring 50 percent of Title I commodities to be shipped on privately owned U.S. flag vessels has been the source of many problems for Jamaica's importing officials. In addition, demurrage charges resulting from the need to utilize large U.S. flag vessels to comply with cargo preference has diminished the balance of payments relief for which the program was intended. USDA officials are aware of these problems and have attempted to accommodate Jamaican needs to the extent possible within existing regulations. However, cargo preference requirements are unlikely to change in the immediate future, and, therefore, these difficulties will continue to confront Jamaican officials and to diminish the benefits of the program.

APPENDIX E

U.S. AND OTHER DONOR PROGRAMS:
THE CONTEXT OF PL 480 ASSISTANCE

I. BACKGROUND

During the period under consideration in this impact evaluation, FY 1975-1980, Jamaica was experiencing increasingly difficult economic problems. Beginning in 1974, Jamaica underwent the first of seven consecutive years of negative growth, leading to serious social, political, and economic disruptions. This last, in particular, led to crippling balance of payments deficits which, to a large extent, became the focus of much of the foreign assistance received by Jamaica during this period. While the bulk of the assistance was provided in the form of fast-disbursing lines of credit for balance of payments support, the portion represented by project loan and grant assistance by all donors was concentrated, for the most part, in the priority sectors of agriculture, health, education, and energy.

II. U.S. ASSISTANCE STRATEGY

Faced with a worsening situation in Jamaica, the U.S. Government, in mid-1977, undertook a review of its assistance to that country. To this end, joint U.S.-Jamaica economic cooperation talks were held in May 1977 to ascertain the extent of Jamaica's problems, determine what support might be available from other donors and, most important, recommend a U.S. response, in terms of an assistance package, to the situation. Following its review, the U.S. team recommended that consideration be given to approving an assistance package of \$80 million to \$110 million for the FY 1977-1978 period. Within the above range, PL 480 assistance and the Commodity Credit Corporation (CCC) credits were recommended to be from 25 percent to 35 percent of the total package.

The recommendation of an increase in assistance for Jamaica reflected a modification in U.S. Government policy toward that country. This modification responded to a number of considerations, including a revived interest in the Caribbean area and a heightened concern for the possible implications, for both the United States and Jamaica, of the destabilizing conditions the latter was undergoing. In general, the economic assistance package was designed to help meet the immediate foreign exchange requirements, while allowing Jamaica to develop policies to correct the economy's structural weaknesses and eliminate the principal constraints to sustained, equity-based development and growth.

In July 1977, an assistance package totaling \$62 million for FY 1977 and FY 1978 was approved by the President. This package included provisions for \$12 million in PL 480 Title I

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commodities in FY 1977 and \$10 million in FY 1978. The level eventually delivered in FY 1977 totaled \$13.4 million, while the planned \$10 million was delivered in FY 1978.

The USAID/Jamaica strategy, which was developed based on the objectives of the economic assistance package, was premised on the conclusion that alleviation of Jamaica's balance of payments crisis was essential to the reversal of economic stagnation and decline, and the resumption of growth and development. Thus, based on the President's decision and the recommendation of the study team, the USAID Mission proposed to provide a significant level of balance of payments and fiscal relief to Jamaica while continuing to work concurrently on basic development constraints through functional account-funded projects.

As the program developed, PL 480 Title I assistance averaged \$10.5 million annually over the FY 1977-1980 period. This average level represented a significant increase from the most recent level of \$2.5 million in FY 1976. As a result, PL 480 Title I, along with a commodity import program (CIP) loan of \$9.5 million in FY 1978, was the principal and most rapid balance of payments support. Housing investment guaranty (HIG) funds disbursed through the regional Caribbean Development Facility also provided some balance of payments support. In general, however, this source of funds was not as effective or immediate in its impact on the balance of payments as were PL 480 and the CIP loan.

While these sources of funds were addressing the balance of payments problem in the short term, USAID/Jamaica also sought to address, through development assistance projects, the longer term problems of a stagnant agricultural sector, severe unemployment, and overpopulation. During this period, the bulk of the Mission's efforts were directed at the agriculture sector, which was estimated to employ 30 percent of the labor force, encompass 50 percent of the population, yet produce less than 10 percent of GNP. Lack of growth in agriculture over the 1967-1977 decade was a major cause of Jamaica's increasing unemployment, high inflation rates, foreign exchange shortage, and high rural-urban migration. It also helped aggravate emerging nutritional problems among the poor.

In response to these conditions, the Mission concentrated its efforts in agriculture on small farmers with holdings of 1 to 10 acres. According to 1968 census data, the last year available at the time of the review, this target group represented 62 percent of all farmers and 81 percent of farmers with holdings of 1 acre or more. In addition, although this group controlled only 25 percent of all land farmed, it accounted for most of the domestic food crop and over 25 percent of agricultural exports.

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The Mission's strategy in the agricultural sector sought to improve the productivity and income of the target group by principally addressing the following issues:

1. Inadequate management capability in the Ministry of Agriculture, ranging from policy to budgeting to project implementation
2. Inadequate agricultural research capacity to deal with the country's agronomic problems and the paucity of linkages between research and extension
3. The growing problem of erosion and the need for soil conservation, which affected 80 percent of small farmers
4. An inefficient marketing system for food crops based upon small retailers ("higglers") who, individually, handled very small quantities of commodities but, in the aggregate, accounted for 85 percent of domestically produced foods and a significant portion of export commodities. This system led to regionalization and simultaneous shortages and gluts of particular commodities, and to postharvest losses ranging from 30 to 40 percent.

In response to these identified constraints, the Mission's agricultural sector portfolio included activities in inland fisheries; an integrated rural development effort combining land settlement, soil conservation, research, afforestation, and extension components; and improvement of the Ministry of Agriculture's planning capability. The Mission also designed an agricultural marketing project during this period, but its implementation did not begin until FY 1981. Between FY 1975 and FY 1980, the Mission provided over \$24 million in assistance to this sector.

Other areas of Mission involvement during this period included assistance to the education and human resources sector (approximately \$15 million), the health sector (some \$500,000), and the population planning sector (over \$3 million). The first sector included national planning assistance for the Ministry of Education, a project designed to improve planning in manpower and skills training for employment needs, and a major rural education sector loan of over \$11 million. This latter encompassed curriculum development, teacher training, and school-improvement and construction components. Health-sector assistance covered the areas of planning, training, data gathering and analysis, information system development, and management. In the population planning area, USAID was the major donor--the sole source of condoms and a major supplier of oral contraceptives.

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The USAID/Jamaica objectives and goals represented by individual projects in the Mission portfolio were, in general, reflected in the self-help measures included in the PL 480 Title I agreements from FY 1978 on. These self-help measures also reflected the pursuit of more general objectives by the Government of Jamaica (GOJ). As detailed in the annual self-help reports, the GOJ has reported fulfillment of these measures based on the actions it has taken in response to AID projects, other-donor projects, or on its own initiative.

On balance, the USAID portfolio appears to have been properly targeted toward two of the areas of greatest need in the country--the agriculture and the family planning sectors. There is some question, however, about the appropriateness of the rural education sector loan during this period.

Within the agriculture sector, the emphasis seems to have been properly directed at the critical areas of planning, income generation, and nutrition improvement through nontraditional activities (inland fisheries) and an integrated rural development effort combining approaches to the priority areas of soil conservation, research, extension, and afforestation.

The family planning project, in turn, was supportive of the efforts of two multilateral donors and of private non-governmental organizations which were providing contraceptive commodities and financing pilot programs in areas such as adolescent fertility and voluntary sterilization. Although there is some question about the degree of support given to the family planning effort by the Government of Jamaica during this period, primarily because of budget constraints, USAID assistance in this sector was proper and useful, given that the country was experiencing a high birth rate and that a significant portion of the family planning effort was performed outside Government channels.

While the need to address education sector problems was arguably also important, given the deterioration of the country's educational system, the eventual productivity of such an intervention was probably constrained by labor market conditions and policies. In other words, the efficacy of such a project must be measured against high levels of unemployment and underemployment and large-scale emigration among the skilled and educated.

The USAID strategy, in sum, was twofold. It addressed both the short-term balance of payments problems, principally through PL 480 Title I sales, and the longer term development problems in the agriculture sector through Development Assistance funds. The strategy of helping to increase production and employment, especially in agriculture, supported Government of Jamaica plans for reducing its balance of payments deficit,

lowering its unemployment rate, and developing its natural and human resources.

III. OTHER DONOR ASSISTANCE

Jamaica's economic difficulties during this period also led to a dramatic increase in the level of other donor assistance. According to the Organization for Economic Cooperation and Development (OECD), in 1975 Jamaica ranked 21st among 45 Western Hemisphere countries and territories receiving development assistance. By 1978, Jamaica ranked sixth among these 45 countries, reflecting the significant increase in priority it had attained as an aid recipient.

In 1976, external assistance to Jamaica totaled almost \$56 million; by 1980 this assistance had reached a level of approximately \$230 million. While the majority of the assistance which Jamaica received during this period was in the form of fast-disbursing lines of credit and balance of payments support, project assistance loans and grants were concentrated in the sectors of agriculture, health and nutrition, education, and energy.

The largest amount of external project assistance was directed at the agriculture sector. The World Bank and Inter-American Development Bank, for example, were funding rural development programs aimed at small farmers in the western and southern regions of Jamaica. At the same time, a number of bilateral donors were supporting programs that focused on specific commodities (such as rice, bananas, pork, and beef), the dairy industry, and ocean fisheries, rather than specifically on small farmers as a target group.

The external assistance which Jamaica received during this period appears, on the whole, to have been reasonably well related to its needs and priorities. The Development Coordination Committee's (DCC) staff report on a multiyear country strategy for Jamaica (September 1978), however, noted that the generalized donor emphasis on the rural poor was a "necessary but insufficient" concern. The report stated that attention was also required to modernize public administration, energy alternatives, the environment, and similar nontraditional assistance areas.

In addition, coordinating the large number of donor programs proved to be difficult for the Government of Jamaica. Many of the donors were pursuing similar mandates emphasizing assistance to the rural poor, leading to the presence of several donors in the same sectors. The DCC staff report noted that the distribution of projects among the assistance sectors

suggested that there should perhaps be more of a division of labor among donors. The requirements of dealing with many donors, all having different procedures, placed an added burden on the Government of Jamaica's already strained management resources.

Prior to the 1978 establishment of the Caribbean Group for Cooperation in Economic Development, coordination among donors was entirely on an ad hoc basis. Although the Caribbean Group provided an appropriate vehicle for coordinating donor assistance and efforts, it appears that more could have been done along these lines, especially in view of the serious personnel and management problems facing the Government of Jamaica during this period. Furthermore, the lack of a viable formalized coordination mechanism for foreign donor assistance apparently continues to be a problem. In its FY 1981 County Development Strategy Statement, for example, USAID/Jamaica commented that:

The limitation on the absorption capacity of the GOJ is made even more critical by the concentration of donor activity in a few sectors....The absorptive capacity problem [however] need not be a binding constraint. At the level of the GOJ and the donor countries, efforts can be made to rationalize the flow of external assistance into the sectors....Better coordination of the activities of donor countries is a basic step which can lead to a less disruptive flow of assistance to the GOJ. Most donor agencies are beginning to appreciate the need for such in-country coordination....

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SELF-HELP MEASURES: PL 480 TITLE I AGREEMENTS

The self-help measures component of the PL 480 Title I agreements negotiated between FY 1975 and FY 1980 reflect, in general, the project and program priorities of the USAID Mission and the overall development priorities of the Government of Jamaica (GOJ). During the period FY 1975-FY 1977, the five self-help measures included in the agreements were practically identical. Three covered the general sectors which the Mission supported at the time: forestry, family planning, and nutrition projects through schools and health clinics. The other two dealt with GOJ efforts to increase the domestic production of food crops and the need for improved storage and handling of food commodities.

With the inception of an increased PL 480 assistance program, the number of self-help measures contained in the agreements expanded dramatically. However, this increase in the number of measures did not occur immediately after the initiation of the expanded PL 480 program in FY 1977. The PL 480 agreement for that year listed only six measures (the five mentioned above and a new one referring to the feeder roads program as an aid to increased marketing of food). By comparison, the FY 1978 agreement listed 13 measures. (See Annex A to this appendix for a summary of the self-help measures found in the PL 480 agreements.)

We found no explanation as to why USAID/Jamaica waited a year to take the opportunity presented by the large increase in PL 480 assistance to negotiate expanded self-help measures. We assume, however, that the short period of time between Presidential approval of the assistance package on July 20, 1977 and the signing of the PL 480 agreement on August 8, 1977, as well as the emergency character of the package, argued against expanding the scope of the discussions at that time. It should be noted that U.S.-Jamaica relations had been deteriorating prior to the time the increased assistance was approved and that the assistance package was approved with only two months remaining in FY 1977.

The increase in the number of measures in FY 1978 paralleled the increased availability of local currency generations resulting from the FY 1977 and subsequent agreements. The added self-help measures also complemented, and may have been a result of, the agreement between the Mission and the GOJ, signed in March 1978, on the uses of the local currencies generated by the Title I sales.

Some of the self-help measures repeated or reinforced provisions contained in individual Mission project documentation; others were used to pre-leverage conditions necessary for

the initiation of other Mission projects. Still other measures reflected general development objectives. A common feature of these measures, however, whether adopted prior to or after the increase in food assistance, is that they were stated mostly in general terms and were not easily quantifiable or measurable. Thus, it is difficult to make a determination of the progress attained toward their accomplishment.

In addition, it is evident from our discussions with various ministries and line agencies that, while they might have been aware of the existence of self-help measures, they were not aware of the purpose or reason behind the inclusion of a particular measure or set of measures in the agreements. Thus, it is unlikely that these ministries and agencies were consciously planning and conducting their operations to advance the objectives set forth in the self-help measures.

This assessment tends to be confirmed by the explanation given by the Ministry of Finance about how the annual self-help reports are generated. The Ministry advises the line ministries and agencies early each fiscal year (or, upon signing of the PL 480 agreement for that year) that a self-help report is to be prepared at the end of the year and provides them with the text of the self-help measures. In response, the line agency selects and assembles data during the year on its activities, whether AID-related or not, which it considers to have been supportive of these measures. The data are forwarded to the Ministry of Finance, which writes the self-help report, primarily by selecting and editing those data which are related to the self-help measures. These data can be related to actions taken in response to AID projects, activities undertaken under other donor projects, or those the GOJ has taken on its own account.

Although it appears to be mostly ex post in nature, this system may not be as lacking in controls as it first appears. Although the Ministry of Finance does not have an enforcement role vis-a-vis the self-help measures, it does have a monitoring responsibility. Therefore, it can bring shortfalls in meeting the measures to the attention of the ministry or agency involved. There is, however, no apparent budgetary pressure or influence which the Ministry of Finance can bring to bear on any problems. Ministry of Finance personnel, though, do not consider shortfalls to be a problem unamenable to solution through the continuing dialogue they hold with other ministries.

The Ministry of Finance is the GOJ entity which appears to be most knowledgeable about the existence, and the need to report on, the self-help measures. This, of course, is because the PL 480 Title I agreements are negotiated principally between the Mission and the Ministry of Finance. The self-help

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measures themselves are normally arrived at after discussions with the Mission, between the Mission and Washington and, to a seemingly lesser extent, between the Mission and elements within the GOJ. Final discussion and agreement on the measures take place during the negotiating sessions between the Mission and the Government.

It would seem, however, that in spite of the monitoring role exercised by the Ministry of Finance, the objectives contained in the self-help measures would be better served by a greater involvement of the line ministries and agencies in the determination and implementation of these objectives. Insofar as we can determine, their involvement in this process has been, at best, minimal and limited to responding to a general data request from the Ministry of Finance. In fact, we found little if any knowledge about the self-help measures among Mission-counterpart agencies in the GOJ.

Therefore, to increase understanding of and active support for the self-help measures, we would recommend that line ministries and agencies, and particularly the personnel and offices which are Mission counterparts, become much more involved in the development and selection of the self-help measures to be included in PL 480 agreements. Similarly, the self-help measures and the steps taken to support them should be the subject of a continuing dialogue between the Mission and its GOJ counterparts. Such a dialogue will serve to emphasize the need to consider these measures and their attainment as part of an agency's normal planning and operations process.

All of this, however, does not mean that the self-help measures have not had an impact. In fact, their major, although limited, impact was on one of the initial purposes for which the PL 480 program was designed: the provision of counterpart funds for AID, GOJ, and other donor projects. Since the self-help measures, to a large extent, reflected the funding priorities and concerns detailed in the Memorandum of Understanding on the use of local currency generations, they were an added means of reminding the GOJ that these priorities and concerns required funding. This pressure, of course, would be brought to bear indirectly through the Ministry of Finance's role in monitoring and reporting progress toward attaining the self-help measures. Since this impact on counterpart funding is limited, however, it does not diminish our belief that a close dialogue between the Mission and the line agencies is required on the self-help measures.

ANNEX A

SUMMARY OF SELF-HELP MEASURESI. AGRICULTURE

- Strengthen the Forest Department of the Ministry of Agriculture by improving its organization, administration, and physical facilities, and by increasing reforested acreage.
- Use its best efforts to increase the production of local food crops through Operation GROW, by furnishing, through Government and private means, additional acreage for cultivation.
- Continue efforts of the Ministry of Agriculture, as identified in the GOJ Emergency Production Plan, to help make Jamaica more self-sufficient in food crops by intensifying local cultivation of food.
- Continue to support and strengthen the Ministry of Public Works Rural Feeder Roads Program under which greater accessibility to agricultural markets is being provided.
- Bolster the capability of the Ministry of Agriculture to plan and design national and regional projects which address identifiable constraints on the rural poor, including projects directed at improving agricultural research, extension, and education.
- Continue to support soil conservation and the development of farming systems to maximize the economic productivity of small farms.
- Provide adequate personnel and financial support for the continued development of the fresh-water fisheries program.
- Continue the efforts of the Ministry of Agriculture to help make Jamaica more self-sufficient in food crops by intensifying local cultivation of food, for example, as outlined in the Emergency Production Plan.
- Provide personnel and financial support to the efforts and programs of the Ministry of Agriculture to increase the effectiveness and efficiency of the agricultural marketing system.

II. HEALTH, NUTRITION, AND POPULATION

- Continue and improve as much as possible the coordinated efforts of population control programs through the National Family Planning Board (NFPB).
- Accelerate the planned comprehensive evaluation of the National Family Planning Program and intensify efforts to implement population programs.
- Provide adequate personnel and financial support for the Planning and Evaluation Unit and Statistical Division in the Ministry of Health and Environmental Control.
- Develop with the GOJ, in conjunction with the Ministry of Health, a comprehensive and integrated population and development policy.
- Strengthen the ability of the Ministry of Health's National Family Planning Board to carry out national family planning and population programs designed to reduce high rates of adolescent pregnancy.
- Strengthen, expand, and improve the nutritional aspects and preparation and distribution of foods in the school, preschool, and maternal and child health supplementary feeding programs through the Nutrition Products Center and other local facilities.
- Disseminate information on the storage and handling of food commodities throughout the nation.
- Provide adequate personnel and financial support for the Division of Nutrition and Dietetics of the Ministry of Health and Environmental Control.
- Undertake the projected evaluation of the nutritional impact and management efficiency of the Maternal and Child Health Supplementary Feeding program.
- Maintain the programs of disseminating information on and improving the storage, handling, and distribution of food commodities throughout Jamaica.
- Provide the financial support and personnel for an analysis and evaluation of the nutritional impact and management efficiency of the supplementary feeding program.

III. HOUSING

- Continue the program of low-cost housing, tenement upgrading, squatter settlement improvement, sites and services, and rural home improvements.

IV. EDUCATION

- Provide adequate personnel and financial support for agricultural vocational schools and rural continuing education centers.
- Provide financial support for rural primary schools to continue development of the curriculum with an agricultural bias and train teachers through in-service training to implement the revised curriculum.

THE PROGRAMMING AND USE OF LOCAL CURRENCY GENERATIONS

The PL 480 agreements for FY 1974 through FY 1976 provided entirely for blended and fortified foods to be used in Government of Jamaica school feeding and maternal and child health programs. Shipments of PL 480 commodities in these three years, therefore, did not result in the generation of local currencies, because the foods were not sold locally, but were used directly in the above programs. However, with the initiation of a larger scale program of commodity imports in FY 1977 and the sale of the bulk of these imports through commercial channels, local currencies began to be generated.

In the period prior to mid-1978, when local currencies generated by the sale of Title I commodities became increasingly available, a wide range of both multilateral development bank (MDB) and other foreign donor-assisted projects were experiencing slow disbursement rates and delays in implementation. Although some of this can be traced to initial startup delays, ineffective control, and increased project costs, much of it can be ascribed to the lack of available counterpart financing in the Government of Jamaica budget. Much of this lack of counterpart financing, in turn, was related to the public sector dissavings which had taken place regularly since 1972 and the continued capital flight, which had a negative effect on domestic investment and productivity and, thus, on Government revenues.

Concurrently with the increased levels of PL 480 assistance in FY 1977, there was also an increase in the levels of USAID project assistance made available to Jamaica. In an effort both to exercise control over the PL 480 local currency generations and to assure that adequate amounts of counterpart funding were made available to AID projects, the Mission and the Jamaica Ministry of Finance and Planning concluded a Memorandum of Understanding on March 23, 1978. This memorandum, titled "Utilization of Jamaican Currency for High Priority Development Activities," covers the use of local currency generations under existing and future PL 480 and commodity import program (CIP) agreements.

Under the memorandum, it was agreed that local currency health and population, education, and housing, "placing emphasis on improving the lives of the least privileged segments of the population in Jamaica and on improving their capacity to participate in the development of the country." Furthermore, the memorandum provided for the education and housing sector activities to be financed by generations from the CIP loan, while PL 480 generations would fund the other sectors.

Within the sectors listed above, priority in the allocation of local currency would go to (1) support ongoing projects being assisted by AID, (2) support activities to facilitate programs being considered for AID assistance, (3) support activities to complement such ongoing or proposed programs, and (4) support other high-priority development projects for Jamaica. Attached to the memorandum was a tentative list of 22 activities to be supported between March 1978 and March 1981, totaling over J\$70.8 million.

Among these activities, only four (Integrated Rural Development, Rural Education Project, Fish Production System Development, and the IBRD/USAID health improvement projects in Cornwall) represented the use of local currencies as counterpart for ongoing projects. These four activities, though, accounted for almost 33 percent (J\$23 million) of the expected generations of local currencies. Such a use was also listed for a fifth activity, the Agriculture Sector Loan, which was in the planning stages at the time of the signing of the memorandum. This project, however, accounting for an additional J\$20 million during the period of the memorandum, was not implemented as expected. Thus, the bulk of the anticipated local currency generations was initially earmarked for actual or planned projects in which the Mission was involved.

The balance of the local currency generations was primarily identified for budget support activities for ministries and agencies participating in AID projects, although there was some support for other donor projects. The list of activities supported by counterpart generations, and amounts allocated to each, was modified in November 1979 by mutual agreement between the Mission and the Ministry of Finance and Planning. This was done to reflect both new projects initiated since the signing of the agreement and changed requirements for counterpart allocations for individual projects. Currently, the Mission anticipates that once the FY 1982 PL 480 agreement is signed, a new list of projects and allocations will be drawn up in cooperation with the Ministry of Finance. (See Annex B for a listing, by activity and amount, of the allocation of local currencies generated by both PL 480 and the CIP loan during the period FY 1977-1980.)

The local currencies generated by the sale of PL 480 Title I commodities are credited to a special account in the Bank of Jamaica. Payments into the account are made directly by the Jamaica Commodities Trading Company (JCTC--formerly, Jamaica Nutrition Holdings, Ltd.), the sole importers of staple commodities for Jamaica.

Once the imported commodities, including those supplied under PL 480, arrive in Jamaica, they are transferred at dockside to private sector or parastatal processors and

distributors, who pay JCTC in local currency. That portion of the currency which is attributable to PL 480 is forwarded to the Bank of Jamaica which, in turn, advises the Ministry of Finance of such deposits. The latter, per the Memorandum of Understanding, provides the Mission with the monthly statements of balance prepared by the Bank of Jamaica.

The Ministry of Finance is responsible for administering the use of counterpart funds and participates in the selection procedures for projects which are to receive such funding. Transfers from the PL 480-generations special account are made by the Ministry of Finance on the basis of expenditure data provided by the line ministries and agencies for those projects identified in the Memorandum of Understanding, as amended. Thus, drawdowns from the special account are in the form of a reimbursement for project-related expenses incurred by the entity responsible for implementing the project. Withdrawals from this account are transferred to the Government of Jamaica general budget, known as the Consolidated Fund. Once withdrawals are made from the special account, the Ministry of Finance sends a report to USAID/Jamaica, showing the projects and amounts against which the withdrawals have been applied.

Like the funds going to support AID projects, disbursements for budget support of other donor activities from the special account are made on a project basis. The amount of each allocation is arrived at through discussions between the Ministry of Finance and the line agencies; the Mission is kept informed by the Ministry of Finance of all disbursements for these purposes.

Both current and former Mission personnel have stated that there have been no significant problems in obtaining counterpart funds for USAID-assisted projects since the inception of the agreement. More important, this remained the case even during the period 1978-1981, when the Government of Jamaica budget was overextended and other donors were faced with implementation problems related to a shortage of, or delay in, counterpart funding.

The only problem we have been able to identify in relation to this system is internal to the Government of Jamaica. Ministry of Finance personnel have stated that the greatest problems they face are related to expenditures by line ministries and agencies. These entities are sometimes late in providing what should be monthly expenditure data to the Ministry of Finance; this situation has reached a stage that requests to the Bank of Jamaica for reimbursement of funds from the special account to the general budget are now mostly done on a quarterly, rather than monthly, basis. The significance of this problem is that since disbursements from the special account cannot be accomplished without expenditure data, reimbursements

to the Consolidated Fund tend to lag, putting budgetary pressure on other components of the general budget.

More serious, however, is the problem of expenditure rates falling below targets. While the Ministry of Finance is charged with monitoring project progress, it can only do so by using the expenditure data it receives. Thus, if the data are late or unavailable, the Ministry of Finance may be unable to detect project implementation problems until late in the Jamaican fiscal year. And, in any case, the Ministry apparently has little ability to influence the performance of line ministries and agencies, other than to maintain a dialogue with them on implementation progress.

This situation is analogous to that regarding self-help measures; and, in fact, in some instances the expenditure of local currencies is related to the performance of particular self-help measures. As a result of this situation, the special account is not liquidated on an annual basis, even though all of it is targeted to the support of activities taking place in a particular year. Again, this puts pressure on other line items within the GOJ budget.

Special accounts have also been set up in the Bank of Jamaica for the local currency generations which result from the activities of other donors. It is significant, however, that AID is the only external donor which requires that the Government of Jamaica provide reports on its special account. We believe this to be a highly desirable level of control by the Mission and a provision which has enabled it to monitor the use of local currency generations to ensure that they are responsive to Mission and Government goals and objectives. At the same time, since the USAID Mission has a resident staff, something many of the other donors do not have, detecting implementation problems in AID activities is not dependent solely on the expenditure data provided by the Ministry of Finance.

Although a formal AID/GOJ review of the use of the FL 480-generated funds seems to have taken place only once after the signing of the Memorandum of Understanding, the Mission and the Ministry of Finance have maintained sporadic dialogue on this subject. A former Mission officer has stated that the Mission did not always receive regular reports on the special account and that this made it difficult to track the flow of local currency. As is true at present, this was due to the delay which the Ministry of Finance experienced in receiving expenditure data from line agencies. At the same time, he stated that the lack of regular reporting was not a source of concern, since the Mission did not encounter any difficulty in getting the needed counterpart funding for its projects.

Mission personnel have also noted that reports on the special account are currently in arrears, but that the missing reports are expected in the near future. While the fact that these reports are overdue is not good administrative practice, once submitted they do show the specific activities and amounts against which local currency was applied. Mission personnel, furthermore, know of no instance in which funds from the special account were used for activities not previously agreed to by the Mission and GOJ. Should this ever occur, however, the Mission would have recourse to the Memorandum of Understanding to obtain reimbursement of any improperly used funds.

In any event, the agreement on the use of counterpart funds and its implementation has successfully satisfied its two primary purposes: (1) to ensure that Government of Jamaica funding for AID-assisted projects was forthcoming, avoiding that possible impediment to implementation; and (2) to support other development-related activities within the Government's budget which might otherwise not have been fully funded. Most important, this latter category, in many instances, has included the daily operations of AID counterpart staffs within the Government of Jamaica.

ANNEX A

MEMORANDUM OF UNDERSTANDING

(March 23, 1978)

SUBJECT: Utilization of Jamaican Currency for High Priority Development Activities

The purpose of this Memorandum of Understanding is to register our agreement concerning:

- A. Certain key sectors in which Jamaican currency will be used to support Jamaica's socioeconomic development;
- B. The priorities to be followed in allocating said currency;
- C. The activities to be supported; and
- D. The schedule of reviews to be followed.

Jamaican currency generated through AID's PL 480 Agreement 1977/1 and Commodity Import Loan 532-K-011, and any similar AID-supported programs in the future, will be used in support of the development sectors and activities agreed upon herein.

The Jamaican currency generated under each AID-supported program will be credited to its own special, individually identifiable account at the Bank of Jamaica. The Ministry of Finance and Planning shall promptly provide AID with copies of each monthly statement of balance prepared by the Bank of Jamaica.

A. SECTORS

In accordance with provisions of Part II, Item IV of the PL 480 Title I Agreement signed on August 8, 1977, as amended (hereinafter referred to as "PL 480 1977/1"), and Section 6.6 of Commodity Import Program Loan No. 532-K-011 (hereinafter referred to as "532-K-011"), it is hereby agreed that Jamaican currency generated through these programs shall be utilized in the sectors of Agriculture, Nutrition, Health and Population, placing emphasis on improving the lives of the least privileged segments of the population in Jamaica and on improving their capacity to participate in the development of the country.

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In addition, it is hereby agreed that Jamaican currency generated under Loan 532-K-011 may be utilized in the education and housing sectors, and such other sectors as may be agreed upon in the future.

It is hereby agreed that activities in the aforementioned sectors shall receive first priority in the allocation of Jamaican currency.

B. PRIORITIES

Within the aforementioned sectors, the following will be the general order of priority:

1. To support ongoing projects which are being assisted by AID;
2. To support activities which would facilitate programs being considered for such assistance;
3. To support activities which would complement such ongoing and/or proposed programs; and
4. To support other high priority development projects for Jamaica, to be agreed upon by AID and the Ministry of Finance and Planning.

C. ACTIVITIES

Attached to this Memorandum of Understanding is the tentative list of activities [Annex B], with sums allocated to them, upon which it is intended that expenditure of Jamaican currency will be incurred.

Adjustments to this tentative list of activities will be agreed upon through an exchange of letters between the Financial Secretary of the Ministry of Finance and Planning, or his nominee, and the Director of USAID/Jamaica, or his nominee.

D. REVIEWS

It is agreed that there will be periodic reviews of the progress of these activities, the amounts expended on those activities, the availability of Jamaican currency for those activities, the rate at which Jamaican currency is being generated under AID-supported programs, and possible adjustments to the list of activities.

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Such reviews will take place on a quarterly basis within 30 days after the end of each calendar quarter. In addition, either party may request such ad hoc reviews as they deem necessary. The first quarterly review will take place the third week of April 1978.

The material which the Ministry of Finance and Planning prepares for each review will include information on actual and planned allocations, disbursements, and expenditures of Jamaican currency for each activity; and a reconciliation with the monthly statements of the Bank of Jamaica.

GOVERNMENT OF JAMAICA

UNITED STATES OF AMERICA

By: (signed)
Eric O. Bell

By: (signed)
Donor M. Lion

Title: Minister of Finance
and Planning

Title: Mission Director,
USAID Jamaica

By: (signed)
Frederick Irving
Title: Ambassador U.S.A.

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Table G-1. Local Currency (\$000) Required by Specified Projects

Project	1978				1979	Add'l Reqmts to March 1981	Total
	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-March		
<u>Health</u>							
Health Improvement	197	197	197	197	197	1,600	2,585
Vital Statistics	8	8	8	88	9	72	113
Family Housing	444	444	444	444	444	4,896	7,116
Budget Spt-Vector Cntrl Unit	100	100	100	100	100	900	1,400
Total Health	749	749	749	749	750	7,468	11,214
<u>Agriculture</u>							
Integrated Rural Dev.	345	651	651	652	652	10,716	13,667
Agriculture Sector Loan	-	-	-	-	-	20,000	20,000
Fish Prod. Systems Dev.	125	125	125	125	125	2,375	2,000
Expansion Blue Mtn. Coffee	200	400	400	425	425	425	2,275
Marketing Improvement	100	100	50	50	50	100	450
Rural Roads Improvement	259	252	252	252	252	1,008	2,275
Agriculture Census	310	300	300	-	-	-	910
Ag. Survey Data Analysis	-	50	50	50	32	-	182
Total Agriculture	1,339	1,878	1,828	1,554	1,536	34,624	42,759
<u>Housing</u>							
Spt. for Urban Upgrading	80	79	368	369	368	537	1,801
Spt. for Squatter Settlement	-	192	191	192	191	768	1,534
Total Housing	80	271	559	561	559	1,305	3,335

Table G-1. Local Currency (\$000) Required by Specified Projects (cont.)

Project	1978				1979	Add'l Reqmts to March 1981	Total
	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-March		
Education							
Spt. Staff, Rural Ed. Proj.	32	32	32	32	32	256	416
Spt. Staff, Planning Div.	79	79	79	80	80	720	1,117
Ed. Dev. & Demonstration Cntr.	22	21	22	21	22	176	284
Rural Ed. Proj. (Counterpart)	175	175	1,024	1,024	1,024	3,388	6,810
Bd. for Handicapped Children	-	28	28	28	28	-	112
Training Needs Survey	-	63	62	63	62	394	644
GOJ Education Statistics	60	60	60	60	60	250	550
Youth Training Program	300	300	300	300	300	2,100	3,600
Total Education	658	750	1,607	1,608	1,608	7,284	13,533
Grand Total	2,836	3,656	4,743	4,472	4,453	50,681	70,841

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ANNEX B

ALLOCATION OF LOCAL CURRENCIES GENERATED
UNDER FY 1977 CIP LOAN AND PL 480
AGREEMENTS FY 1977-FY 1980

(Revised as of December 1980)

(J\$ millions)

Sector/Activity	Allocations From Special Accounts		
	1978/1979 Actual	1979/1980 Actual	1980/1981 Estimate
Agriculture and Rural Development			
Integrated Rural Development:	1.216	2.015	2.300
Inland Fish Production Systems	0.545	0.565	1.500
Rural Roads Improvement	1.267	1.000	--
Marketing Improvement	0.350	0.200	--
Agricultural Census	0.910	0.450	--
Small Enterprise Dev./MSU (off-farm employment)	0.100	0.100	--
Rural Financial Markets/OSU	--	0.030	0.078
Agricultural Planning	0.075	0.005	0.600
Agricultural Research, Extension and Education	0.300	0.100	0.100
Farm System Development	0.100	0.178	--
Expansion of Blue Mountain Coffee	--	0.662	0.662
Agricultural Marketing Development	--	--	0.300
Agricultural Marketing Development, Road Construction and Improvement (parishes)	--	--	3.000
Jamaica School of Agriculture	--	--	2.336
Subtotal	4.863	5.385	10.906
Education and Human Resources Development			
Rural Education Sector Loan	--	5.537	3.500
Manpower Planning, Training and Employment	--	0.260	0.991
Project Development Resource Team (PAMCO)	--	0.120	0.400
Special Education for Handicapped	0.056	0.056	0.040
In-Service Curriculum Training	--	--	0.250
Training for Development	--	--	0.250
Vocational Training	--	--	13.405
Subtotal	0.056	6.046	18.636

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ALLOCATION OF LOCAL CURRENCIES GENERATED
UNDER FY 1977 CIP LOAN AND PL 480
AGREEMENTS FY 1977-FY 1980 (cont.)

(Revised as of December 1980)

(J\$ millions)

Sector/Activity	Allocations From Special Accounts		
	1978/1979 Actual	1979/1980 Actual	1980/1981 Estimate
Health, Nutrition and Family Planning			
Family Planning Services	2.018	--	3.779
Health Improvement, Young Children	0.009	--	0.305
Vital Statistics (VISTIM)	0.036	--	0.184
Emergency Feeding Program	0.083	--	0.058
Client Data System	--	--	0.462
Contract Assistance, Central Foods	--	--	0.510
Health and Nutrition Sector Development	--	--	4.100
Primary Health Care	--	--	5.527
Subtotal	2.146	--	15.447
Urban Development and Housing			
Urban Upgrading	0.254	0.725	1.500
Squatter Settlements	--	0.966	6.100
Subtotal	0.254	1.691	7.600
Total	7.319	13.042	52.369
Grand Total			73.000

APPENDIX H

THE ECONOMIC IMPACT OF FOOD AID TO JAMAICA:
1975-1980

APPENDIX H

THE ECONOMIC IMPACT OF FOOD AID TO JAMAICA: 1975-1980¹I. INTRODUCTION

The purpose of this appendix is to analyze the economic impact of PL 480 Title I food aid extended by the United States to Jamaica during the period 1975-1980. At the beginning of this period Jamaica was in the midst of a severe balance of payments crisis, which called for fundamental adjustments in the pattern of production and demand. By 1977, policies had been implemented to address the crisis, and the United States began to provide food aid at annual levels around \$10-\$12 million.² This assistance was one element of a larger U.S. assistance response, which in turn was part of a multidonor effort that included substantial levels of assistance from the International Monetary Fund. The explicit U.S. objective was to promote economic recovery on a sustainable basis, and thereby to achieve political objectives of increased political and social stability and better relations with Jamaica and the Manley Government.

The first issue in considering the economic impact of PL 480 Title I is the question of fungibility--did the assistance provide additional imports of food to Jamaica, or did it help finance imports of food which would have taken place in any event, and therefore essentially contribute to foreign exchange availability? In other words, would changes in the level of PL 480 have been reflected mainly in changes in food imports (in which case we were providing food) or would the effects of such changes have shown up mainly in other imports? The evidence suggests that food aid contributed mainly to foreign exchange availability--which was appropriate, considering the nature of the crisis facing Jamaica, and the U.S. objective of providing foreign exchange to promote economic recovery.

The data on food imports indicate significant reductions in both nominal and real terms for the period in question (see

¹This appendix is a summary of a longer paper, "Economic Stabilization and Structural Adjustment in Jamaica, 1975-80," prepared for this study and forthcoming as AID Discussion Paper No. 41.

²Food aid at levels around \$2 million had been provided in 1975 and 1976.

Table H-1). Measured in constant U.S. dollars, average food imports during the 1977-1980 period amounted to less than 40 percent of the levels prevailing during 1970-1974. These reductions generated considerable civil and political unrest, and further reductions (in the absence of PL 480) would have been politically very difficult. At the same time, food imports represented only about 7 percent of total imports (in current U.S. dollars) during the 1977-1980 period. Given that foreign exchange for imports was severely constrained and tightly budgeted by an intragovernmental committee, it is evident that changes in the level of PL 480 would have been distributed over the foreign exchange budget as a whole, rather than concentrated on the small and politically sensitive food portion of the budget. Conversations with public officials involved in the foreign exchange rationing process, though not conclusive, were consistent with this view.

Table H-1. Jamaican Imports, 1970-1974 to 1980
(in millions of current and constant 1974 U.S. dollars)

	1970-74 (average)	1975	1976	1977	1978	1979	1980
Food Imports (current \$)	89.4	129.9	88.0	53.6	76.1	65.7	72.3
Food Imports (constant \$)	148.7	127.7	83.8	59.0	76.1	51.3	50.0
Total Imports (current \$)	655.0	1,123.2	912.8	746.8	864.7	1,002.8	1,172.6
Total Imports (constant \$)	1,079.0	978.2	742.7	581.7	665.2	592.5	543.5

Source: IBRD 1982, Tables 3.4 and 3.5.

Under these circumstances, the economic impact of PL 480 should be analyzed in terms of its contribution to foreign exchange in Jamaica. At levels of \$10-\$12 million, this contribution amounted to around 1 percent of merchandise imports or exports during this period. Given this small magnitude and the essentially fungible nature of the foreign exchange, the quick and easy answer to the economic impact question is that there was no discernible impact.

However, the issue can and should be pursued by asking whether the foreign exchange provided by U.S. assistance was used effectively in terms of the objective of promoting sustainable economic recovery. More generally, was the policy and institutional setting conducive to the effective use of foreign exchange? These issues are the main focus of this appendix.

The remainder of this appendix is structured as follows. Section II discusses the development setting in the mid-1970s, including the important structural and institutional features of the Jamaican economy at the mid-point of the decade, and some of the economic forces and trends evident since the late 1960s and early 1970s. Section III deals with the crisis that came to a head in 1976, the policy and assistance response to the crisis, and the results of the efforts at stabilization and economic recovery. These efforts succeeded in slowing the declining trend in GDP during 1978 and 1979, but at a heavy cost in terms of increased foreign debt and without resolving the problem of excessive dependence of the structure of production on imports. In other words, structural adjustment in the pattern of production and demand did not take place to a degree sufficient to place the Jamaican economy on a sound footing.

This latter proposition is explored in a more rigorous fashion in Section IV. There, a more formal framework is used to examine the magnitude of the adjustment problem facing Jamaica, the extent to which structural adjustment was accomplished, the sources of adjustment, and the role of policies in determining the pattern and extent of structural adjustment. Section IV essentially reinforces the findings of Section III. However, more detail is provided on the sectoral pattern of adjustment, and the analysis may be of particular interest to those concerned with structural adjustment in Jamaica during the 1980s.

Based on this analysis, a final brief section of this appendix draws conclusions about the economic impact of PL 480 Title I assistance on the economy as a whole and on the agricultural sector in particular. An annex presents the methodology underlying the formal analysis of structural adjustment. There is also a statistical annex.

II. THE DEVELOPMENT SETTING IN THE MID-1970s³

By the middle of the 1970s Jamaica was by most standards a relatively affluent, advanced developing country, favorably

³See Tables 1 to 4 in the Statistical Annex for data underlying this discussion.

endowed with human resources, mineral resources, agricultural land, physical and institutional infrastructure, and geographic features conducive to trade and tourism. The structure of production and employment was dualistic. At one extreme, agriculture accounted for a very low share of production (compared with other countries at similar income levels) but a high share of employment. The opposite was true of mining. Within the structure of demand and expenditure, imports bore a relatively high ratio to GDP (46%), well above the share of exports to GDP (35%). Merchandise imports mainly comprised raw materials (30%), fuel (20%), and capital goods (27%), reflecting a high degree of import substitution for consumer goods and the heavy dependence of the structure of production on imports. The major import for consumption was food (13% of merchandise imports). The structure of exports (goods and net nonfactor services) was dominated by bauxite and alumina (56%), sugar (12%), and tourism (14%). By 1974 the current account deficit of \$175 million was financed mainly by nonconcessional public capital inflows.

The pattern of growth in the late 1960s and early 1970s generated a highly skewed distribution of earned income and worsening unemployment. However, more direct indicators of basic needs satisfaction and standards of living were relatively positive (compared with countries at similar income levels), suggesting that government policies in the areas of health, education, and nutrition were successful in redressing some of the imbalance in earned income distribution.

The pattern of development in Jamaica up to the mid-1970s, and some aspects of performance during the 1975-1980 period, can be explained in part by the policy and institutional setting that evolved during the 1960s and early 1970s, as well as by the response of the Government elected in 1972 to the problems of dualism and income inequality. First, a skewed distribution of land, adverse movements in the rural/urban terms of trade, and a low share (4%) of agriculture in total investment contributed to depressed agricultural production and productivity, a skewed distribution of income, accelerated rural/urban migration, and a worsening urban unemployment problem. Second, the system of trade and industrial incentives resulted in a highly capital-intensive and import-intensive structure of production, not only in mining, which is inherently capital-intensive, but also in manufacturing. As a result of protection from import competition and the small size of the domestic market, many manufacturing enterprises operated as monopolies or oligopolies, with high prices, inefficiency resulting from lack of domestic and external competition, substantial excess capacity, and limited incentives to produce for export. Third, the pattern of investment up to the early 1970s had been heavily concentrated in mining and tourism, contributing to Jamaica's capacity to earn foreign exchange through

exports, but with only limited impact on employment. Fourth, an increasingly militant, organized labor movement (justified in part by imperfect competition on the production side) provided for artificially high labor costs in the formal sectors of the economy, mitigating against employment expansion, inducing rural/urban migration, and contributing to maldistribution of income.

More generally, the policy and institutional setting during the late 1960s and early 1970s was one in which the role of market forces in allocating resources was severely constrained by the factors mentioned above. This had detrimental effects not only on efficiency but also on equity, in that employment growth was much slower than output growth. The Government elected to power in 1972 placed high priority on improving the distribution of income, but chose to address the problem through establishment of increased social control over the economy. This entailed (among other things) expansion of the role of public enterprises and establishment of the State Trading Corporation to control imports; an increased role for price controls; programs to promote basic health, education and housing services; land reform; measures to raise minimum wages and promote higher wage settlements for low-income categories; increased worker participation in industry, including cooperative ownership of some of the large sugar estates; and public works and public employment programs. Between 1970 and 1975 Central Government current revenues, current expenditures, and capital expenditures increased steadily, both in absolute terms and in relation to GDP.

III. ECONOMIC STABILIZATION⁴

A. The Crisis

By 1976 foreign exchange, upon which the structure of production depended heavily, had become extremely scarce. Important causal factors included declining levels of direct foreign investment; sharp increases in import prices, particularly for fuels and raw materials; mounting debt service requirements stemming from public borrowing abroad for purposes that did not effectively enhance Jamaica's capacity to earn foreign exchange; diminished creditworthiness; declining tourism receipts; and declining production of important export crops and processed agricultural exports, despite favorable movements in export unit values. Introduction of the bauxite

⁴See Tables 5 to 13 in the Statistical Annex for data.

levy had strong positive effects on foreign exchange accruing to Jamaica from mineral exports, despite the ensuing declines in mineral production. These positive effects were large enough to compensate for the oil price increase but not for other adverse trends in foreign exchange availability.

The deficit for goods and nonfactor services was approximately \$250 million (roughly 10% of GDP) in 1975 and 1976. Because of mounting outflows of investment income, the current account deficit was roughly around \$310 million in 1975 and 1976.

B. The Policy and Assistance Response

During the first half of 1977, the Government undertook several measures to address the crisis. These included wage guidelines and restrictions; increased import restrictions; devaluation; and measures to improve public finances. These measures led to a 2-year standby agreement with the IMF. However, slippages under the agreed program led to an interruption of the agreement by the end of 1977, and negotiation of an Extended Fund Facility (EFF) agreement by May 1978. The policy measures on which this agreement was based included measures to "promote output and growth" (through better functioning of public enterprises and the import licensing system, encouragement of domestic and foreign private investment, incentives to exporters, etc.); restrictions on the growth of wages and improved regulation of prices; improved fiscal and monetary performance; and devaluation.

The 1977 IMF agreement anticipated extraordinary external financing of \$190 million for 1977-1978, including a program loan of \$30 million from the IBRD, and \$75 million from the IMF. Jamaica's inability to execute the program was the result of difficulty in managing the incomes policy, shortfalls in budget revenue, GOJ concern with the implications of the program for output and employment, and shortfalls in foreign assistance. In the latter case, the unavailability of an anticipated \$49 million from Trinidad and delays in disbursements of prior commitments of assistance because of slow project execution and lack of counterpart funds played key roles.

The U.S. assistance response included commitments of \$32 million during U.S. FY 1977, up from \$5 million during the previous 15 months. However, \$17.5 million was project assistance rather than fast disbursing balance of payments assistance. PL 480 Title I accounted for most of the remainder.

The 3-year EFF agreement of May 1978 anticipated extraordinary foreign exchange requirements of \$130 million per year,

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of which the IMF agreement would provide approximately \$80 million. Shortly thereafter, the Caribbean Development Facility (CDF) was established, and members pledged a total of approximately \$52 million for the year beginning in June 1978.

The U.S. response in 1978 included \$12 million allocated by AID through the CDF; an Economic Support Fund (ESF) commodity import program of almost \$10 million, disbursed mainly in 1978; continuation of the PL 480 Title I program at levels around \$10 million; and a Housing Investment Guarantee (HIG) program of \$15 million, which, however, disbursed only \$5 million in 1978.

C. Results

The attempt at economic stabilization and recovery slowed the declining trend in GDP during 1977-1979, but failed to reverse this trend. On the positive side, real growth in domestic food production, mining, and services associated with tourism contributed both to increased output and increased foreign exchange. Otherwise, the main stimulus to output came from growth in public administration, without which declines in GDP growth would have been about 1.5 percent greater. Output of export crops, manufacturing, and construction continued to decline sharply. In the case of export crops and related manufacturing, these declines adversely affected foreign exchange availability.

In terms of the structure of demand, private consumption declined significantly and investment rose correspondingly, reflecting increases in "private" (including public enterprise) investment. The gap between exports and imports of goods and nonfactor services (measured in constant 1974 prices) narrowed sharply to a deficit around 1.5 percent of GDP in 1977 and 1979, and a small surplus in 1978.

The current account deficit was reduced to about \$50 million in 1977, but then increased by about \$50 million per year over the next 3 years. Merchandise exports increased significantly between 1976 and 1979, but this reflected mainly increases in mineral exports. Imports rose somewhat in nominal terms, but fell sharply in real terms except for fuel imports. There was a significant recovery in tourism receipts. However, these latter gains were largely eroded by mounting outflows of investment income, including interest payments and bauxite/alumina profits.

Central Government finances were characterized by improved performance in FY 1978 (April 1978 to March 1979) and then deterioration. The overall deficit remained at about the same level in nominal terms from FY 1976 to FY 1979, and thus

declined steadily in relation to GDP. Current expenditures and the current deficit rose steadily after FY 1978, as did the share of the overall deficit financed by the domestic banking system.

D. Evaluation of the Stabilization Effort

By 1980 it was evident that the stabilization policies implemented during 1977-1979 had succeeded in slowing the decline in GDP, but at a significant cost in terms of increases in foreign debt. Furthermore, the gap between sustainable sources of foreign exchange and foreign exchange requirements remained large. Thus the program was not successful in putting the Jamaican economy on a sound footing, and resolving the problem of excessive dependence on imports. From the standpoint of these objectives, the stabilization program had serious flaws in both design and implementation. An open question is whether any politically feasible program could have succeeded. Such a program would have been able to sustain or increase levels of GDP only by accomplishing far-reaching changes in the structure of production and demand. Yet the capacity of the economy to achieve this sort of structural change was severely constrained by rigidities stemming from policy and institutional factors, including Government controls on prices and imports; public enterprises which were unresponsive (or unexposed) to market forces; private producers in the manufacturing sector sheltered from both domestic and foreign competition; and noncompetitive labor markets in many subsectors. The most serious general flaw is that the program did not seek to diminish the degree of public intervention in the economy, but instead sought to increase the effectiveness of public intervention. Thus, price controls were to be administered more efficiently; imports were to be rationed more effectively; parastatal performance was to improve; etc. Indeed, the most positive example of structural change occurred in the food sector, where production and distribution are private, competitive, and basically unregulated. Yet even in this case the substitution of domestic for imported food was quite difficult from a political standpoint.

IV. STRUCTURAL ADJUSTMENT⁵

This section analyzes in a more formal framework the magnitude of the adjustment problem facing Jamaica in the

⁵See Tables 14 to 21 in the Statistical Annex for data underlying this section.

mid-1970s, and the roles of changes in the level of economic activity and in the structure of production and demand in contributing to adjustment. The analysis focuses on changes in the balance between exports and imports of goods and noncalculating gross domestic product), measured in constant (1974 Jamaican dollar) prices. The underlying framework is presented in more detail in the annex.

A. The Adjustment Problem

The deficit in the resource balance measured in current U.S. dollars was about \$240 million per year during the 1974-1976 period. In 1975 it was J\$425 million (1974 prices), equivalent to almost 20 percent of GDP, and 71 percent of exports. In view of adverse trends in sources of external finance, including net income from factor services and current transfers, public capital inflows, and private capital inflows, this deficit needed to be eliminated or even converted into a surplus.

B. The Adjustment Process

The data on GDP and its components in constant prices reveal that by 1977 the deficit in the resource balance had been nearly eliminated, having declined from J\$425 million in 1975 to J\$66 million in 1977. This improvement resulted wholly from declines in imports, as exports (in constant prices) fell somewhat. From 1977 to 1979 the resource balance worsened to J\$130 million, as foreign assistance permitted some recovery in import volumes that exceeded increases in exports. In 1980, a large increase in mineral exports combined with declines in imports brought the resource balance into surplus. However, because of adverse terms of trade movements, the resource balance measured in current U.S. dollars remained in deficit.

C. Sources of Adjustment

In general, the avenues for addressing the problem of eliminating an external resource gap are through reductions in absorption (i.e., domestic demand, both consumption and investment) and through structural adjustment that entails switching of production and expenditure patterns. In the case of absorption reductions, declines in domestic demand will be associated with reduced demand for imports. A decline in domestic demand can be caused by declines in GDP; by the income effects of adverse movements in the terms of trade; and by policy (e.g.,

restrictive fiscal and monetary policy) and other factors (e.g., autonomous declines in investment) that reduce the level of domestic demand associated with a given level of GDP. In the latter case (i.e., declines in domestic demand relative to GDP), not only is demand for final imports reduced but the amount of domestic production available for export tends to increase. For instance, for a given level of production, a lower domestic demand for sugar increases the portion of production available for export.

The second approach is through structural adjustment that entails switching of production and expenditure patterns. This can comprise shifts in the pattern of demand toward nontradable goods and services (thus freeing up output in the traded goods sector for export or increased import-substitution) and shifts in the pattern of production in favor of traded goods (thus increasing the supply of exports or decreasing the level of imports associated with a given level of domestic demand).

These sources of adjustment are highly interrelated. First, it is clear that if neither GDP nor absorption (Consumption plus Investment) changes, then no adjustment (i.e., no reduction in the resource imbalance) can take place, since

$$\begin{aligned} \text{GDP} &= C + I + (X-M) \\ &= \text{Absorption} + \text{Resource Balance} \end{aligned}$$

Second, if both GDP and absorption fall by a given percentage, then the resource imbalance must fall by that same percentage. In both of these cases, there is no opportunity for positive switching effects in the aggregate, and the entire improvement in the resource balance is attributable to declines in income (GDP) and absorption.

The most favorable scenario for adjustment is one in which GDP levels (and income) are maintained or even increased, but absorption declines. This allows production to shift toward traded goods; and domestic demand to shift towards nontraded goods, both of which contribute to an improved resource balance. Expressed somewhat differently, for a given reduced level of domestic demand, increases in the production of traded goods and shifts in the pattern of demand toward nontraded goods will help sustain levels of GDP and improve the resource balance.

Looking at the end points of the 1975-1980 period, Table H-2 notes some of the salient aspects of the adjustment process in Jamaica:

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Table H-2. Aspects of Jamaica's Structural Adjustment
Process, 1975 to 1980
(1974 Jamaican dollars, in millions)

	1975	1980	Change
Domestic Demand	2,582.8	1,815.0	-29.7%
GDP	2,156.7	1,848.0	-14.3%
Resource Balance	-426.1	33.0	459.1
Portion of Change in the Resource Balance Attributable to			
Absorption Decline			236.7
(GDP decline)			(60.9)
(terms of trade)			(93.1)
(other)			(52.7)
Structural Adjustment			221.7
(expenditure switching)			(234.3)
(production switching)			(-12.6)

Source: Table 19, Statistical Annex.

The large improvement in the resource balance was achieved at a substantial cost in terms of declines in domestic demand (30%) and GDP (almost 15%). The decline in domestic demand relative to GDP meant that structural adjustment took place. This was entirely accounted for by expenditure switching in the direction of nontradables. Production of tradable goods (output in mining, agriculture, and manufacturing) fell absolutely and relative to GDP. A more successful pattern of adjustment would have entailed increases in the production of traded goods, which would have helped sustain GDP and provided for a comparable improvement in the resource balance without such a sharp decline in domestic demand.

Within the 1975-1980 period the significant improvements in the resource balance that took place in 1976 and 1977 (from J\$426 to J\$55 million) followed the same pattern as for 1975-1980 as a whole.⁶ Declines in GDP and switching in expenditure patterns (but not in production) played important roles. During 1978 and 1979 (when the EFF program was in effect) domestic

⁶See Table 19 in the Statistical Annex.

demand rose slightly (2%) while GDP fell (1.7%) so that the resource balance worsened. The large improvement that occurred in 1980 resulted mainly from terms of trade effects, a sharp decline in investment, and expenditure switching.

D. Sources of Adjustment--A More Disaggregated Look⁷

Considering agriculture, mining, and manufacturing as the "tradable" sectors where structural adjustment called for expansion of production absolutely and relative to total GDP, it is apparent that Jamaica failed to achieve positive adjustments in the structure of production--output in this group of sectors fell more rapidly than GDP.⁸ Within this group, performance was not uniformly negative, but rather mixed and in some respects uncertain. Food production increased sharply, a significant positive contribution to adjustment; however, export crop production declined steadily, a significant negative contribution. There is no evidence that the decline reflected an inevitable tradeoff between food and export crop production; instead it involved natural factors, shortcomings in policy, and mismanagement. Overall, agricultural production showed a slight rising trend, and its share in GDP increased significantly. Production in the mining sector also showed a rising trend after 1976. However, this was partially in response to reductions in the bauxite levy, so that the positive effect on foreign exchange accruing to Jamaica was considerably dampened.⁹ Output in manufacturing declined sharply and steadily over the 1975-1980 period by about 30 percent in all compared with a 15 percent decline in GDP. In some instances (e.g., sugar/molasses/rum, where the decline was greater than could be explained by lagging sugarcane production) this was clearly and significantly a negative factor in adjustment. In other instances, declines in production may have promoted structural adjustment, insofar as highly inefficient import-

⁷See Tables 20, 21; also see Table 5 in the Statistical Annex.

⁸It is conventional practice to equate these three sectors with production of traded goods. However, the role of tourism and the prevalence of quantitative restrictions on manufactured imports call this convention into question. These issues are discussed in the next pages.

⁹Between 1977 and 1980 real value added in mining increased by 11 percent, the value of mineral exports increased from \$529 to \$753 million, but the value of foreign exchange accruing to Jamaica from these exports fell from \$342 to \$320 million. See Table 22 in the Statistical Annex.

substituting activities were involved. In many of these cases, production would be more properly characterized as nontraded because of quantitative restrictions on competing imports. In the absence of much more detailed information and data, the pattern of structural change within the manufacturing sector is difficult to evaluate. What is clear is that in a situation where domestic manufacturing production was protected by highly restrictive quotas on imports, and where imported inputs were subject to rationing by public agencies with limited information, using conflicting criteria for allocations and subject to political pressure, the impetus to positive structural adjustment was fairly weak. Against this have to be weighed the political consequences of removing quantitative restrictions on imports, suspending the practice of import rationing, and letting the price of foreign exchange rise sufficiently to choke off excess demand for imports.

Apart from these three sectors, an expansion in output associated with tourism--which is not a "sector" in the national accounts but rather includes the output of various service sectors--also was desirable from the standpoint of structural adjustment. Available data indicate that output associated with tourism rose absolutely and relative to GDP, thus contributing positively to adjustment.

While the aggregate contribution of changes in the structure of production toward tradables was apparently weak and/or uncertain, changes in the structure of demand made a much more significant contribution to adjustment. The pattern of demand shifted substantially toward nontraded goods and services, and away from tradables (defined as the output of mining, manufacturing, and agriculture). This might be taken to indicate that devaluation was successful in inducing expenditure switching by changes in the prices of tradables relative to nontradables. However, most of the shift in "demand" involved increases in Government services. Public consumption increased by 15 percent in real terms from 1975 to 1980 while private consumption declined by 20 percent and investment by 60 percent. Value added in production of Government services rose by 37 percent. Considered only from the standpoint of maintaining GDP and employment in the short run while economizing on imports, it could be argued that this was a technically appropriate pattern of adjustment. However, the real value of such increases in GDP in terms of maintaining income and consumption in Jamaica is highly debatable, depending particularly on distributional issues (the beneficiaries of increased public consumption), and on political perspectives. Further, the increase in public consumption was financed in part by excessive money creation, (which, along with factors mentioned above, contributed to the failure to achieve structural adjustment in the pattern of production), and in part by increased taxes on consumption, which also may have had disincentive effects on workers and producers.

Apart from changes in the structure of domestic demand in the direction of nontradables, overall declines in the level of domestic demand also helped reduce the imbalance between foreign exchange needs and availability. However, the major portion of the decline in demand was attributable to declines in GDP and adverse terms of trade movements. With these factors taken into account, the remaining decline is customarily attributed to "policy." However, in 1977, when declines in demand relative to GDP made the largest contribution to an improved resource balance, it was mainly the large drop in investment that induced the overall decrease in demand. While this drop may be attributable to policy, it is not evident that it reflects successful or effective policies.

V. THE ECONOMIC IMPACT OF PL 480 TITLE I--CONCLUSIONS

A. The Economywide Impact

Food aid under PL 480 Title I, in amounts of approximately \$10-\$12 million per year, was part of a larger U.S. response during 1977-1980 to Jamaica's economic crisis. This response was formulated following the visit of a special mission to Jamaica in mid-1977. The mission recommended that the United States increase its assistance to Jamaica to \$100 million over 3 years, with PL 480 accounting for roughly one-third. In general, the objective of the increased assistance was to promote economic recovery and structural adjustment, and to eliminate the principal constraints to sustained growth and equitable development. This assistance was initiated with full awareness of the negotiations between Jamaica and the IMF, and was intended to be supportive of an IMF agreement and the associated policy reforms.

For reasons set forth above, the impact of PL 480 should be analyzed in terms of its contribution to foreign exchange availability in Jamaica. The levels of PL 480 involved were of a relatively small magnitude, about 1 percent of total merchandise imports. At the same time PL 480 was an integral part of a larger U.S. assistance response, which in turn was a significant factor in a multidonor response to Jamaica's economic crisis. The question is whether the foreign exchange from PL 480 and other sources effectively contributed to economic recovery on a sustainable basis. In other words, did the foreign assistance, and the economic policy package that it supported, effectively contribute to structural adjustment?

The bulk of the overall foreign assistance response, as well as the major policy reforms, occurred in 1978 and continued through 1979, until the suspension of the IMF agreement

in late 1979. During the 1978/1979 period the resource balance actually deteriorated in real terms, as GDP fell slightly, while domestic demand increased slightly. Thus there was no positive structural adjustment during this period (according to the accounting framework used in this paper). More generally, the trends for the 1975-1980 period as a whole--the steady declines in manufacturing and export crop production, the positive performance of food production, the sharp increase in Government services, etc.--were broadly characteristic of the 1978/1979 period as well.

An important proximate cause of the weak impact of foreign assistance in promoting structural adjustment was the import rationing system, which functioned very poorly according to most accounts, because of inherent limits on information and conflicting priorities. A second important factor was the fundamental bias toward inefficient import substitution through quantitative restrictions on competing imports, which remained basically intact during this period. In this context, the potential effectiveness of devaluation was severely handicapped. The actual effectiveness was further reduced by the incapacity of the Government to contain inflation and prevent sharp increases in prices and (to a lesser extent) wages, thereby in some measure nullifying the effect of the devaluation of relative prices. More generally, many of the economic problems created by excessive and ineffective public intervention in the economy were not resolved.

The sizable assistance flows in 1978 and 1979 did not effectively promote adjustment in the structure of production and demand. However, they played an important role in sustaining both domestic demand and GDP levels in real terms. In 1976, 1977, and 1980 domestic demand (consumption plus investment) fell by 10, 12, and 13 percent, respectively, while the declines in GDP were on the order of 6, 2, and 6 percent. For 1978 and 1979, domestic demand increased slightly (about 1 percent per year), and GDP fell slightly. However, this temporary alleviation of the economic crisis came at a high cost in terms of increases in foreign debt, which rose from \$830 million at the end of 1976 to \$1,240 million at the end of 1980.

B. The Agricultural Sector

To the extent that the PL 480 assistance essentially augmented foreign exchange availability rather than food imports--the case argued above--there is not an issue of direct disincentive effects on overall food production through effects on the total quantity of food imports. Nonetheless, it is important to consider whether PL 480 was allocated in the context of

a domestic policy setting that discouraged food production.¹⁰ In fact, the performance of food production is arguably the single most positive achievement during this period. The trend rate of growth in food production was 5 percent during 1976-1980, compared with .5 percent during 1971-1975.¹¹ Furthermore, this improved production can be directly attributed to reduced food imports, which averaged \$140 million during 1971-1975 (1974 U.S. dollars) and dropped to an average of \$64 million for 1976-1980. This provides a compelling example of the incentive effects of reduced food imports. It is noteworthy that domestic food production and the distribution of this food were mainly carried out by the private sector in Jamaica and were largely unregulated, in sharp contrast to export agriculture, which declined steadily during the period. Secondly, it is important to note that changes in the level of food imports had important effects on domestic food production in Jamaica during the 1970s, even though the commodity composition of food imports was quite different from the composition of domestic production.¹²

Two important issues have to do with the possibility of a tradeoff between export crop production and food crop production, and with the overall effect of the level and composition of food supply during this period on consumption and nutrition. With respect to the first issue, if increased import substitution for food caused declines in export crop production, then the net effect of reduced food imports on foreign exchange availability was smaller than the gross effect, and may even have been negative. In fact, export crop production declined at a trend rate of 5.6 percent during the first half of the 1970s, compared with a trend rate of decline of 3.8 percent during the second half of the 1970s.¹³ Most accounts of the decline in export crops emphasize natural factors, policies that affected incentives, and mismanagement, both in production and distribution, and none points to a necessary tradeoff. In particular, both land and labor are widely underutilized in

¹⁰Indeed, even if PL 480 resulted in increased food imports, the question of the specific disincentive effects of the PL 480 is less important from a developmental standpoint than the question of the disincentive effects of Jamaica's overall food import policy and other policies that affect incentives to agriculture.

¹¹Based on data in Table 23 in the Statistical Annex.

¹²In other words, imports of food commodities not produced in a country can have significant disincentive effects.

¹³Based on data in Table 23 in the Statistical Annex.

Jamaica, and yields in export crops are low compared with other countries and with earlier years.

With respect to the issue of nutritional impact, if import substitution for food had a negative impact on nutrition, this impact needs to be weighed against the gains to Jamaica from increased foreign exchange. Reliable data are scant. However, one study found some improvement in nutritional status between 1970 and 1978.¹⁴ While the latter year was an exceptionally good one for domestic food production, this finding is nonetheless impressive, especially in view of the decline in real per capita GDP between 1970 and 1978 of about 16 percent. Indeed, this suggests that the income distributional effects of increased reliance on domestic food production may have been quite positive.

¹⁴"The Consumption Effects of Agricultural Policies in Jamaica," Development Assistance Corporation, Washington, D.C., July 1981.

ANNEX TO APPENDIX HTHE ACCOUNTING FRAMEWORK FOR ANALYZING ADJUSTMENT

The accounting framework used to analyze adjustment in Jamaica is a modified version of the framework used by Frederick Jasperson.¹ The underlying conceptual framework goes back to the work of W. E. G. Salter, and is summarized in its most recent form by W. M. Corden.²

Within this framework, the adjustment problem is one of achieving changes in the Resource Balance (RB), the difference between exports and imports of goods and nonfactor services. All variables are in constant prices, to focus on real changes rather than nominal changes. The point of departure is two basic accounting identities. First, Gross Domestic Product (GDP) is, on the demand side, the sum of Consumption, Investment, and Exports less Imports:

$$\begin{aligned} 1. \quad \text{GDP} &= C + I + X - M \\ &= \text{DD} + \text{RB} \end{aligned}$$

The first two variables, consumption and investment, comprise domestic demand (DD), or absorption. The last two give the resource balance (RB). Second, on the production side GDP includes value added generated in domestic production of goods and services that are either tradable or nontradable, i.e.,

$$2. \quad \text{GDP} = \text{GDP}^T + \text{GDP}^N$$

Typically, GDP^T comprises agriculture, mining, and manufacturing, while all other goods and services are considered nontradable.³ The framework decomposes changes in the resource balance from one year to another according to three

¹Adjustment Experience and Growth Prospects of the Semi-Industrial Economies, IBRD Staff Working Paper No. 477, August 1981.

²W. M. Corden, Inflation, Exchange Rates, and the World Economy (London: Oxford University Press, 1977)

³The discussion of tourism and manufacturing in Section IV of this appendix raises questions about this convention.

contributory factors; absorption, switching, and growth of traded goods output.⁴

Comparing any two years, it is evident from Equation 1 that the change in the resource balance depends on changes in domestic demand and changes in GDP. Let the ratio of domestic demand in the later year to domestic demand in the base year be given by \underline{h} , and the ratio for GDP in the two years be given by \underline{k} . Both \underline{h} and \underline{k} assume values less than 1.0 if there is a decline from the base year to the next year.

The absorption effect reflects changes in demand, both absolute and relative to GDP. In Jasperson's framework the absorption effect is calculated under the assumption that production of tradables remains constant from one year to the next. (The effects of actual changes in production of tradables are then accounted for as switching and growth effects.) The absorption effect on the resource balance is given by

$$3. \quad dRB_1 = (1-\underline{h}) (GDP_{t-1}^T - RB_{t-1})$$

where

dRB_1 is the change in the resource balance because of absorption effects

\underline{h} is the ratio of current domestic demand to base year domestic demand

and the subscripts denote base year values of GDP generated in tradables production, and the resource balance. Looking at Equation 3, suppose that the base year resource balance is negative (a deficit) and that domestic demand declined by 10 percent, so that \underline{h} is nine-tenths. Then the first expression in parentheses is positive (one-tenth). There will be two positive effects on the resource balance because of the decline in absorption. First, the decline in demand ($1-\underline{h}$) will tend to free up production of tradables for increased exports or import-substitution, with positive effects on the resource balance depending on the size of the decline in demand and the level of production of tradables (GDP^T). Second (and separate), even if production of tradables were zero (so that the resource balance was equivalent to the level of imports), a decline in demand has direct positive effects on the resource balance. More generally, if all variables (domestic demand, production of tradables, and production of nontradables) fall by 10 percent, the resource balance will improve by 10 percent. The second term captures this effect.

⁴For purposes of this appendix, the third factor has been subsumed into the other two. See pages H-21 - H-22.

Together, these two terms provide for the absorption effect. In the context of a deficit in the resource balance, this effect will be positive if demand declines, negative if demand increases, and zero if domestic demand is unchanged.

The absorption effect can itself be decomposed into three elements, according to the source of the declines in demand. First, a decline in the terms of trade will have a negative effect on real income and demand, as the purchasing power of exports (in terms of imports) declines. This effect on real income is given by

$$4. \quad \text{TOTAL} = X_t (T_t - T_{t-1})$$

where X_t measures exports, and T_t gives the current terms of trade as measured by the ratio of the export price index to the import price index. If prices of imports rise relative to those for exports, then the terms of trade effect on income (and demand) will be negative. The amount of the absorption effect explained by terms of trade movements is given by

$$5. \quad dRB_{11} = (-\text{TOTAL}/GDP_{t-1}) (GDP_{t-1}^T - RB_{t-1})$$

The second expression in parentheses is the same as for the overall absorption effect. If domestic demand declined by 10 percent, and declines in the terms of trade led to a 5 percent reduction in real income, then terms of trade effects would have accounted for half of the overall absorption effect.

The next component of the absorption effect accounts for declines in demand stemming from declines in GDP. It is given by

$$6. \quad dRB_{12} = (1-k) (GDP_{t-1}^T - RB_{t-1})$$

where k is the ratio of GDP in the second year to GDP in the base year. Thus, if both GDP and domestic demand decline by 10 percent, the absorption effect is entirely attributable to declines in GDP.

The third component of the absorption effect is simply the residual, i.e., that part not explained by terms of trade movements and changes in GDP. Jasperson attributes the residual to policy-induced changes in the level of demand, e.g., restrictive monetary and fiscal policies. However, changes also could come about through "autonomous" declines in demand, by either investors or consumers.

Having accounted for absorption, it remains to consider switching effects (dRB_2) and "growth" effects (dRB_3). Switching effects entail changes in the structure of production (in the direction of a greater share to tradables) and in the

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structure of demand (in the direction of a greater share to nontradables). In the first instance (production switching), the effect on the resource balance is measured by the extent to which output of tradables increases relative to overall GDP, or

$$7. \quad \underline{dRB}_{21} = GDP_t^T - kGDP_{t-1}^T$$

In the second instance (expenditure switching), the effect on the resource balance is measured by the extent to which demand for nontradables increases relative to overall demand, or

$$8. \quad \underline{dRB}_{22} = GDP_t^N - hGDP_{t-1}^N$$

Finally, growth of GDP can contribute to an improved resource balance (for a given level of domestic demand) even if the share of tradables in GDP remains unchanged (i.e., no output switching). If demand stays constant (no absorption effect) and output of all sectors grows by 10 percent (no output switching), there will be a contribution to an improved resource balance from the growth of output in tradables (as well as an improvement from expenditure switching). The growth effect is given by

$$9. \quad \underline{dRB}_3 = (k-1) GDP_{t-1}^T$$

and will be positive or negative according to whether GDP rises or falls. To see the relation of production switching and growth effects, add the two together (Equations 7 and 9). The result is the total change of output of tradables from the base year to the later year.

The total change in the resource balance is given by the change in exports minus the change in imports. Equivalently, it is given by the change in GDP (in absolute terms) minus the change in domestic demand (recall Equation 1). Adding up the absorption effect, the switching effects, and the growth effect, it can be demonstrated that these exactly account for the entire change in the resource balance.

This framework was modified for use in this appendix, by subsuming the growth effect into the absorption effect. Recall the expression for the contribution of declines in GDP to absorption, and thereby to the resource balance (Equation 6). The first part of this expression is simply the growth effect with the opposite sign (see Equation 9). The modification in the framework entailed adding the growth effect to both the entire absorption effect and to the GDP contribution to that effect. Accordingly the absorption effect becomes

$$3' \quad \underline{dRB}'_1 = (1-\underline{h})(GDP^T_{t-1} - RB_{t-1}) + (\underline{k}-1)(GDP^T_{t-1}) = \underline{dRB}_1 + \underline{dRB}_3 \\ = (\underline{k}-\underline{h})(GDP^T_{t-1}) + (1-\underline{h})(-RB_{t-1}).$$

This is equivalent to altering Jasperson's assumption that tradables output remains constant (for purposes of calculating the absorption effect). Instead, we assume for purposes of calculating the absorption effect that tradables output changes as GDP changes (by k). Thus if $\underline{k}=1$ (no change in GDP) the two calculations of absorption effects are the same. However, if $\underline{k}=\underline{h}$ (GDP and demand both change by the same fraction) the only effect on the resource balance is through the second term, which in turn will be equal to the GDP effect:

$$6' \quad \underline{dRB}'_{12} = (1-\underline{k})(-RB_{t-1})$$

In the case of Jamaica, GDP fell in each year under consideration, so that the "growth effect" was negative in each year, though quite small in 1978 and 1979. Adding the growth effect to the absorption effect lowers the absolute value of the latter in 1977 and 1980 (when absorption fell and the absorption effect was positive) and makes the absorption effects more negative in 1976, 1978, and 1979. These changes are fully reflected in the calculation of the GDP contribution to the absorption effect. Thus the adjustment does not affect either the terms of trade or the policy contribution (nor does it affect the calculation of the switching effects).

To get a feel for the framework it is worth considering some simple numerical examples. As a base case, assume that

$GDP = 100$	$C = 80$
$GDP^T = 50$	$I = 45$
$GDP^N = 50$	$X = 20$
	$M = 45$

In this example domestic demand is 125, and the resource balance is -25. Output is evenly divided between tradables and nontradables.

To examine various approaches to adjustment, consider first the case where both GDP and domestic demand decline by 20 percent, with no change in the pattern of demand or production. Then:

$GDP = 80$	$C = 64$
$GDP^T = 40$	$I = 36$
$GDP^N = 40$	$X = 16$
	$M = 36$

The result is a small improvement in the resource balance, from -25 to -20 (or 20 percent). The absorption effect is given by:

$$dRB'_1 = (\underline{h}-\underline{k})(GDP^T_{t-1}) + (1-\underline{h})(-RB_{t-1})$$

The first term is zero since $\underline{h}=\underline{k}=.8$, while the second term accounts for the entire improvement (of 5) in the resource balance. This in turn is completely accounted for by the GDP effect:

$$dRB'_{12} = (1-\underline{k})(-RB_{t-1}) = (.2)(25) = 5$$

Since output of tradables falls by the same fraction as GDP, and output of nontradables falls by the same fraction as domestic demand, there is no switching or structural adjustment.

In this example, output and demand fell by 20 percent. a steep price to pay for a small absolute decline in the resource balance. The situation would be much improved if the decline in absorption did not come about through reductions in GDP. Consider as a second case one in which absorption declines by 20 percent ($\underline{h}=.8$) while GDP stays the same ($\underline{k}=1.0$). Then, since

$$GDP = DD + RB = C + I + X - M$$

it's evident that the resource balance will have improved to zero (from a deficit of 25), as GDP now equals domestic demand (both at 100).

The absorption effect is given by

$$\begin{aligned} dRB'_1 &= (\underline{k}-\underline{h})(GDP^T_{t-1}) + (1-\underline{h})(-RB_{t-1}) \\ &= (.2)(50) + (.2)(25) \\ &= 15 \end{aligned}$$

Calculating the first term reveals that two-thirds of the absorption effect comes through the favorable effects of declines in domestic demand for traded goods with output remaining constant ($\underline{k}=1.0$). The second term embodies the same improvement as in the earlier example. In decomposing the absorption effect according to source, GDP has not declined so that there is no contribution to the absorption effect through this channel. Thus, the absorption effect is attributable either to terms of trade effects or to "policy" and other factors.

The absorption decline has accounted for only part of the improvement in the resource balance (15 out of 25). It

follows that switching effects, or structural adjustment, accounted for the remainder. If GDP has remained evenly divided between tradables and nontradables, then there was no production switching. Hence, the entire switching effect would be accounted for by expenditure switching, i.e.,

$$\begin{aligned} dRB_{22} &= (GDP_t^N - GDP_{t-1}^N) \\ &= 50 - (.8)(50) \\ &= 10 \end{aligned}$$

Any other combination of GDP^T and GDP^N that adds up to 100 (the postulated level of GDP) will give switching effects (production, expenditure, or both) that add up to 10.

From these two examples it is evident that positive structural adjustment takes place if and only if absorption declines relative to GDP. Expressed somewhat differently, for a given reduction of domestic demand, structural adjustment permits GDP levels to be maintained.

STATISTICAL ANNEX TO APPENDIX H¹

Table 1. Structure of Production and Employment, 1974

Sector	Share of GDP (percentage)	Share of Total Employment (percentage)
Agriculture, Forestry, Fishing	7.2	36.9
Mining	13.2	1.2
Manufacturing	17.0	12.6
Food Processing (including sugar)	6.3	n/a
Construction	9.4	6.3
Electricity, Gas, Water	1.0	n/a
Services	52.2	43.0
Public Administration	(11.1)	(11.8)
Distributive Trades	(18.1)	(12.0)

Source: IBRD 1982, Tables 1.3 and 2.5.

¹The main data source for these tables is Jamaica: Development Issues and Economic Prospects, January 29, 1982 (IBRD 1982). Also, various IMF reports, identified by the year during which the report appeared, served as data sources.

Table 2. Structure of Demand and Expenditures,
1970 and 1974
(current prices)

Component	As Share of GDP	
	1970	1974
Consumption	72.6	86.0
Public	(11.7)	(17.8)
Private	(60.9)	(68.2)
Investment	31.6	25.0
Fixed Capital	(31.4)	(22.1)
Changes in Stocks	(0.2)	(2.9)
Exports of Goods and Nonfactor Services	33.2	35.0
Imports of Goods and Nonfactor Services	37.4	46.0
External Savings (current account balance)	11.4	7.3
Internal Savings	20.2	17.6
Public	(4.3)	(5.7)
Private	(15.9)	(11.9)

Source: IBRD 1982, Tables 2.2 and 2.12.

Table 3. Balance of Payments, 1970-1974
(dollars in millions)¹

	1970	1971	1972	1973	1974
Exports (FOB)	342.1	370.9	373.7	399.4	605.1
Agriculture	21.6	23.0	23.4	28.4	24.3
Mineral	218.6	234.9	237.3	255.3	402.4
Manufactures	82.1	94.2	100.5	102.3	155.5
Sugar	(35.3)	(39.1)	(42.1)	(39.6)	(81.8)
Other Processed					
Agricultural	(13.2)	(14.8)	(16.3)	(16.7)	(21.4)
Unclassified	19.8	18.8	12.5	13.4	22.9
Imports (CIF)	522.2	553.2	587.2	676.6	935.9
Consumer Goods	163.5	167.1	206.5	190.0	200.5
Food	(70.4)	(72.4)	(89.0)	(93.3)	(122.1)
Fuels	32.8	52.3	55.5	72.7	195.2
Raw Materials	134.4	140.2	168.1	199.9	288.2
Capital Goods	191.5	192.2	185.0	207.3	252.0
Trade Balance	-180	-182	-213	-278	-331
Nonfactor Services, Net	96	110	124	113	110
Tourism, Net	(80)	(93)	(110)	(100)	(97)
Investment Income, Net	-98	-103	-121	-58	21
Transfers, Net	22	21	27	27	24
Current Account Balance	-160	-154	-183	-196	-176
Direct Foreign					
Investment	161	175	94	75	23
Public Capital, Net	9	23	37	137	173
Other Capital, E&O	11	-18	23	-46	50
Increases in Reserves	21	26	-25	-30	70
External Public Debt					
(end-year, disbursed)	131.6	162.0	191.0	308.9	490.8

¹Sources: IBRD, 1982, Tables 3.1, 3.2, and 3.4. Figures on External Public Debt from IMF 1974, 1977, and 1978.

Table 4. Central Government Finances,
1970/1971 to 1974/1975
(Jamaican dollars, in millions)

	1970/71	1971/72	1972/73	1973/74	1974/75
Current Revenues	218.4	259.3	292.3	347.7	563.5
Taxes - Income & Profits	83.8	109.1	119.7	147.7	185.0
Taxes - Production & Consumption	45.9	51.7	60.3	87.1	115.6
Other Taxes	53.7	66.4	72.9	86.9	93.1
Bauxite Levy	-	-	-	-	131.0
Other Revenue	35.0	32.2	39.4	25.5	38.8
Current Expenditures	179.0	210.3	263.2	340.2	493.2
Compensation of Employees	57.2	67.9	84.2	109.5	142.4
Other Goods & Services	38.3	42.2	50.3	59.2	81.4
Interest Payments	15.8	18.1	21.6	25.6	38.8
Current Transfers	67.7	82.1	107.1	145.9	230.6
Current Balance (Savings)	39.4	49.0	29.1	7.5	70.3
Capital Expenditures	73.2	86.1	96.5	102.9	257.4
Capital Formation	32.6	42.3	37.2	49.7	84.7
Purchases of Land	3.9	2.4	6.5	3.0	3.8
Capital Transfers	36.7	41.4	52.8	50.2	168.9
Overall Balance	-33.8	-37.1	-67.4	-95.4	-187.1
External Financing	-	18.5	19.1	53.9	55.2
Domestic Financing	33.8	18.6	46.5	41.5	131.9
Central Bank	n/a	n/a	n/a	38.4	32.9
Other Banks	n/a	n/a	n/a	-20.3	21.7
Nonbank	10.1	12.1	23.2	23.4	77.3
Memo: GDP (Calendar Year)	1171.1	1280.1	1438.8	1735.1	2169.4

Table 4. Central Government Finances, FY 1970 to FY 1974 (continued)

	Shares of GDP ¹				
	FY 70	FY 71	FY 72	FY 73	FY 74
Revenues/GDP	18.6	20.3	20.3	20.0	26.0
Current Expenditures/ GDP	15.3	16.4	18.3	19.6	22.7
Savings/GDP	3.3	3.9	2.0	0.4	3.3
Capital Expenditure/ GDP	6.3	6.7	6.7	5.9	11.9
Overall Deficit/GDP	-2.9	-2.8	-4.7	-5.5	-8.6

¹The Fiscal Year extends from April 1 to March 31. The use of calendar year GDP tends to understate these ratios insofar as nominal GDP was increasing over time.

Sources: IBRD 1982, Tables 5.2 and 5.3; IMF 1978, Table XVIII; IMF 1977, Table XIII.

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Table 5. Real Growth in GDP, 1975-1980¹

Sector	1975	1976	1977	1978	1979	1980	1976-1980 ¹
Agriculture	-0.4	2.7	2.8	9.2	-10.9	-2.9	-0.7
Export	(-19.4)	(22.1)	(-17.8)	(13.2)	(-11.0)	(-17.2)	(-9.0)
Domestic	(3.0)	(-5.4)	(10.5)	(20.1)	(-11.6)	(6.8)	(5.8)
Mining	-20.2	-20.5	17.5	2.6	-1.6	10.3	6.9
Manufacturing	-2.4	-4.9	-7.1	-4.9	-5.5	-12.4	-7.5
Construction	1.3	-20.0	-20.8	3.6	-0.8	-30.3	-13.2
Electricity, Gas, Water	4.1	3.0	-1.7	1.3	-1.7	1.3	-0.2
Services	1.7	-3.5	-0.3	-1.1	1.2	-3.0	-0.8
Public Admin.	(5.5)	(15.9)	(6.9)	(4.8)	(6.6)	(-1.2)	(4.2)
Distrib. Trade	(2.7)	(-18.2)	(-3.9)	(-5.1)	(-4.6)	(-6.7)	(-5.1)
GDP	-0.6	-6.1	-1.9	-0.3	-1.4	-5.4	-2.3
GDP w/o Public Admin.	-1.4	-9.1	-3.5	-1.3	-3.1	-6.4	-3.6

Shares of GDP
(constant prices)

Agriculture	7.5	8.2	8.6	9.4	8.5	8.7
Mining	7.3	6.2	7.4	7.6	7.6	8.8
Manufacturing	18.4	18.6	17.6	16.8	16.1	14.9
Construction	9.8	8.3	6.7	7.0	7.0	5.2
Electricity, Gas, Water	1.1	1.2	1.2	1.2	1.2	1.3
Services	56.0	57.5	58.5	58.0	59.6	61.0
Public Admin.	(12.3)	(15.2)	(16.5)	(17.4)	(18.8)	(19.6)

¹Average annual rate of growth, comparing real value-added in 1980 and 1976.

Source: IBRD 1982, Tables 2.5, 2.6, and 2.8.

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Table 6. Employment--Total and by Sector, 1975-1980 (thousands)

	1975	1976	1977	1978	1979	1980
Labor Force	857.7	883.6	910.0	939.0	953.6	991.2
Employed	682.3	685.9	689.8	708.5	689.0	720.4
Unemployed	175.4	197.7	220.2	230.5	264.6	270.8
(Nonseekers)	(100.7)	(114.8)	(129.7)	(136.3)	(160.9)	(150.5)
Unemployment (%)	20.5	22.4	24.2	24.5	27.7	27.3
(Adjusted) ¹	(9.9)	(10.8)	(11.6)	(11.7)	(13.1)	(14.3)
Agriculture	226.9	243.9	244.0	257.0	232.0	263.5
Mining	7.4	7.9	7.4	5.9	7.6	7.9
Manufacturing	73.9	75.5	76.2	79.0	73.8	76.7
Construction	44.6	38.0	32.9	32.9	31.9	25.4
Services & Utilities	329.5	320.6	329.3	333.7	343.7	346.9
(Public Admin.)	(98.5)	(106.4)	(111.3)	(108.7)	(110.1)	(108.7)

¹Calculated by subtracting Nonseekers from both the Labor Force and the Unemployed.

Source: IBRD 1982, Table 1.3.

Table 7. Shares of GDP by Expenditures, 1975-1980

	<u>Constant Prices</u>					
	1975	1976	1977	1978	1979	1980
Consumption	88.3	96.0	96.5	90.8	87.4	90.2
(Private)	(69.8)	(74.0)	(73.8)	(67.1)	(63.0)	(65.5)
(Public)	(18.5)	(22.0)	(22.7)	(23.6)	(24.3)	(24.7)
Fixed Capital	22.4	16.7	11.8	12.1	14.8	12.1
Changes in Stocks	2.6	2.1	0.8	1.1	0.8	-0.6
Exports	27.7	25.4	28.6	30.2	32.0	41.2
Imports	47.5	40.5	31.3	34.6	38.6	39.4
Resource Balance	-19.8	-15.1	-2.7	-4.4	-6.6	1.8
Statistical Discrepancy	6.5	0.3	-6.4	0.4	3.6	-3.5
	<u>Current Prices</u>					
Fixed Capital	23.3	16.6	11.7	13.4	16.9	14.8
Cent. Gov.	(4.7)	(9.9)	(8.6)	(8.2)	(6.2)	(6.1)
Other ¹	(18.6)	(6.7)	(3.0)	(5.2)	(10.2)	(8.6)
Changes in Stocks	2.8	2.1	0.8	1.4	1.2	0.9
Investment	26.1	18.7	12.5	14.8	18.1	15.7
Internal Savings	16.0	7.5	10.5	11.2	12.1	7.9
(Public)	(2.7)	(-9)	(-3.0)	(-2.7)	(-2.1)	(-2.8)
(Private)	(13.3)	(8.4)	(13.5)	(13.9)	(14.2)	(10.7)
External Savings	10.2	11.2	2.0	3.6	5.9	7.9

¹Includes public enterprises.

Source: IBRD 1982, Tables 2.2 and 2.12.

Table 8. Balance of Payments, 1975-1980
(U.S. dollars, in millions)

	1975	1976	1977	1978	1979	1980
Exports (FOB)	760.0	630.0	724.0	792.0	815.0	961.0
Agricultural	29.7	32.8	28.1	31.4	33.1	26.9
Mining	474.4	425.1	528.5	582.3	581.7	732.2
(Bauxite)	(149.6)	(187.5)	(205.3)	(234.0)	(213.5)	(197.5)
(Alumina)	(314.8)	(237.6)	(323.2)	(348.3)	(368.2)	(534.7)
Manufactures	231.7	158.2	161.0	175.4	167.3	167.7
(Sugar)	(153.8)	(61.4)	(63.4)	(59.5)	(56.9)	(54.4)
(Other)	(77.9)	(96.8)	(97.6)	(115.9)	(110.4)	(113.3)
Other + Adjustment	24.2	14.0	6.4	3.0	32.6	34.2
Imports (CIF)	1123.0	913.0	747.0	865.0	1003.0	1173.0
Consumer Goods	233.8	164.5	96.4	129.9	121.0	131.2
(Food)	(129.9)	(88.0)	(53.6)	(76.1)	(65.7)	(72.3)
Fuels	215.0	203.5	225.6	193.9	331.2	451.1
Raw Materials	328.7	310.9	270.6	343.1	337.3	392.6
Capital Goods	345.7	233.9	154.2	197.8	213.3	197.7
Trade Balance	-363.0	-283.0	-23.0	-73.0	-188.0	-212.0
Nonfactor Services						
(Net)	103.0	55.0	79.0	131.0	159.0	193.0
(Tourism)	(76.0)	(47.0)	(94.0)	(136.0)	(185.0)	(230.0)
Investment Income						
(Net)	-52.0	-113.0	-129.0	-179.0	-203.0	-293.0
Services Balance	51.0	-58.0	-50.0	-48.0	-44.0	-100.0
Transfers	26.0	6.0	20.0	26.0	80.0	91.0
(Private)	(21.0)	(2.0)	(15.0)	(15.0)	(70.0)	(82.0)
Current Account	-286.0	-335.0	-53.0	-95.0	-152.0	-221.0

Source: IBRD 1982; Tables 3.1, 3.2, 3.4, 3.6, 3.7, and 3.8. There are some minor discrepancies among these tables.

Table 9. Volume and Unit Value Indices of Major
Exports and Imports, 1974-1980
(1974 = 100, value data in U.S. dollars, in millions)

	1974	1975	1976	1977	1978	1979	1980
Exports							
Bauxite							
Value	104.6	149.6	187.5	205.5	234.0	213.5	197.5
Volume	100.0	70.5	80.8	82.1	82.1	82.1	78.2
Unit Value	100.0	203.0	222.4	239.6	273.1	249.3	241.8
Alumina							
Value	297.8	324.8	237.8	323.2	348.3	368.2	534.7
Volume	100.0	85.7	57.1	71.4	75.0	75.0	85.7
Unit Value	100.0	127.2	139.6	151.9	155.9	164.8	216.1
Sugar							
Value	81.8	153.8	61.4	63.4	59.5	56.9	54.4
Volume	100.0	94.0	85.2	79.0	72.7	70.7	49.6
Unit Value	100.0	200.0	88.1	98.1	100.0	98.4	134.0
Banana							
Value	12.6	16.1	13.2	13.9	17.3	18.2	10.5
Volume	100.0	94.0	105.9	105.2	102.1	89.7	43.1
Unit Value	100.0	136.0	98.0	104.9	134.5	160.9	184.0
Imports							
Food							
Value	122.1	129.9	88.0	53.6	76.1	65.7	72.3
Volume	100.0	104.6	68.6	48.3	62.3	42.0	41.0
Unit Value	100.0	101.7	105.1	90.9	100.0	128.1	144.4
Fuel							
Value	195.2	215.0	203.5	225.6	193.9	331.2	451.1
Volume	100.0	102.3	87.1	78.2	74.6	90.9	74.9
Unit Value	100.0	107.7	119.7	147.8	133.2	186.7	308.5
Raw Materials							
Value	288.2	328.7	310.9	270.6	343.1	337.3	392.6
Volume	100.0	100.2	88.8	73.1	96.6	72.3	74.8
Unit Value	100.0	113.8	121.5	128.4	123.2	161.9	182.1
Capital Goods							
Value	252.0	345.7	233.9	154.2	197.8	213.3	197.7
Volume	100.0	104.0	65.2	48.4	45.6	47.1	38.0
Unit Value	100.0	131.9	142.4	126.4	172.1	179.7	206.5
Total							
Value	935.9	1123.2	912.8	746.8	864.7	1002.8	1172.6
Volume	100.0	104.5	79.4	62.2	71.1	63.3	58.1
Unit Value	100.0	114.8	122.8	128.3	129.9	169.3	215.6

Sources: IBRD 1982, Tables 3.3, 3.4, and 3.5.

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Table 10. Capital Account--Balance of Payments, 1975-1980
(dollars, in millions)

	1975	1976	1977	1978	1979	1980
Current Account Deficit	-298.0	-335.0	-53.0	-95.0	-152.0	-221.0
Net Public Capital	179.0	86.0	26.0	103.0	76.0	128.0
(Disbursements)	(210.0)	(143.0)	(116.0)	(224.0)	(178.0)	(194.0)
(Amortizations)	(31.0)	(57.0)	(90.0)	(121.0)	(102.0)	(66.0)
Direct Foreign Investment	-2.0	-1.0	-7.0	-27.0	-26.0	-11.0
Other Capital ¹	40.0	36.0	-26.0	-120.0	-40.0	-29.0
Changes in Reserves (+ denotes decrease)	81.0	214.0	60.0	133.0	142.0	75.0
External Public Debt (End-year)	645.2	831.8	905.0	1022.7	1095.6	1243.2

¹Including errors, omissions, and SDR allocations.

Sources: IBRD 1982, Table 3.1; IMF 1981, Table 58; IMF 1978, Table XXXIV.

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Table 11. Central Government Operations, 1975/1976 to 1980/1981
(Jamaican dollars, in millions)

	1975/1976	1976/1977	1977/1978	1978/1979	1979/1980	1980/1981
Total Revenues	640.7	606.7	652.2	1,037.4	1,133.0	1,194.9
Tax	477.5	484.8	487.9	737.4	836.1	923.6
Bauxite Levy	125.0	80.0	110.0	268.0	232.5	230.0
Other	38.2	41.9	54.3	32.0	64.4	41.3
Current						
Expenditures	614.1	771.6	832.8	1,139.1	1,307.8	1,576.2
Goods & Services	n/a	493.3	587.9	767.3	807.3	959.3
(Wages/Salaries)	n/a	(389.5)	(419.8)	(517.0)	(583.7)	(683.2)
Current Transfers	n/a	183.0	112.0	159.2	223.4	271.8
Interest Payment	58.5	95.6	132.9	212.6	277.1	345.1
Current Balance	26.6	-164.9	-180.6	-101.7	-174.8	-381.3
Capital						
Expenditure	304.8	359.2	332.6	431.5	356.4	474.5
Overall Balance	-278.2	-524.1	-513.2	-533.2	-531.2	-855.8
Financing						
Net Foreign	99.4	83.2	21.1	283.1	140.2	219.7
Net Domestic	192.5	445.4	453.0	223.4	461.2	641.4
Bank	(114.9)	(330.1)	(232.4)	(134.9)	(339.0)	(485.4)
Nonbank	(77.6)	(115.3)	(220.6)	(88.5)	(122.2)	(156.0)
Residual	-13.7	-4.5	39.1	26.7	-70.2	-5.3
<u>In Percentage of GDP</u>						
Total Revenue	24.1	21.8	20.5	26.7	25.8	24.3
Current						
Expenditure	23.1	27.7	26.2	29.3	29.7	32.1
Current Balance	1.0	-5.9	-5.7	-2.6	-4.0	-7.8
Total Expenditure	34.6	40.6	36.6	40.4	37.8	41.8
Overall Balance	-10.5	-18.8	-16.1	-13.7	-12.1	-17.4
Domestic						
Financing	4.3	11.9	7.3	3.5	7.7	9.9

Sources: IMF 1981, Tables 8, 32, and 35; IMF 1978, Tables XII and IV.

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Table 12. Prices, Wages, and Terms of Trade, 1975-1980
(percentage change from previous year)

	1975	1976	1977	1978	1979	1980
GDP Deflator	17.4	10.6	12.2	25.9	15.9	16.6
Consumer Prices (annual averages)	17.4	9.8	11.1	35.0	29.1	27.2
Wages (selected index)	22.0	26.2	18.2	15.4	n/a	n/a
Wages (large establishments)	n/a	n/a	n/a	13.0	17.5	23.8
Farmgate Prices:						
Export	61.5	1.2	0.1	20.1	10.9	14.5
Domestic	28.1	8.4	35.2	-1.6	31.4	10.8
Export Unit Values (\$)	51.1	-1.1	5.6	3.6	14.7	17.0
Import Unit Values (\$)	15.8	7.4	11.8	0.6	14.7	27.4
Terms of Trade (\$)	30.5	-7.9	-5.6	3.1	0	-8.2

Sources: IMF 1981 and 1978, Tables 1 and 5 for GDP Deflector and Consumer Prices.

IMF 1978, Table X for Selected Wage Index.

IMF 1981, Table 5 for Wages in Large Establishments.

IMF 1982, Table 8.2 for Farmgate Prices.

IMF 1981, Table 5.4 for Export and Import Unit Values and Terms of Trade except for 1975, which is based on IBRD 1982, Tables 2.1 and 2.2.

Table 13. Nominal and Real Effective
Exchange Rates; End-Year, 1973-1980
(1970-1972 = 100)

	1973	1974	1975	1976	1977	1978	1979	1980
Nominal Effective Exchange Rate	111	115	107	105	123	207	220	219
Real Effective Exchange Rate	91	92	84	81	93	110	111	92

Source: IMF 1981, Chart 1. An increase in the index represents a depreciation of the Jamaican dollar.

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Table 14. The Adjustment Problem in Jamaica, 1970-1977
(dollars, in millions - current prices)

	1970	1971	1972	1973	1974	1975	1976	1977
Trade Balance	-180	-182	-213	-278	-331	-363	-283	-23
NFS Balance (tourism-net)	96 (80)	110 (93)	124 (110)	113 (100)	110 (97)	97 (76)	55 (47)	79 (94)
Goods and NFS Balance	-84	-72	-89	-165	-221	-266	-228	56
Factor Services and Transfers	-76	-82	-94	-31	45	-26	-107	-109
Current Account Balance	-160	-154	-183	-196	-176	-292	-335	-53
Direct Investment (net)	161	175	94	75	23	-2	-1	-7
Public Capital (inflow)	9 (15)	23 (33)	37 (54)	137 (157)	173 (203)	179 (210)	86 (143)	26 (116)
(outflow)	(6)	(10)	(17)	(20)	(30)	(31)	(57)	(90)
Other Inflows (and errors and omissions)	11	-18	27	-46	50	34	36	-26
Capital Account Balance	181	180	158	166	246	211	121	-7
Changes in Reserves (- denotes increase)	-21	-26	25	30	-70	81	214	60

Source: Table 3 and Table 8.

Table 15. Imports: Volume and Value Trends
(1970-1972 = 100)

	Value 1970-1972 (\$ mill.)	Volume Index 1974/1975	Unit Value Index 1974/1975	Value Index 1974/1975	Value 1974/1975 (\$ mill.)
Consumer Goods (food)	179.0 (77.3)	62.6 (77.2)	193.8 (211.1)	121.3 (163.0)	217.2 (126.0)
Raw Materials	147.6	80.9	258.4	209.0	308.5
Fuel	46.9	117.9	370.9	437.3	205.1
Capital Goods	189.6	86.6	182.0	157.6	298.9
Total Imports	563.1	82.0	223.0	182.8	1,029.6

Source: IBRD 1982, Tables 3.4 and 3.5. There are some discrepancies among the import figures in these tables.

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Table 16. Exports: Volume and Value Trends
(1970-1972 = 100)

	Value 1970-1972 (\$ mill.)	Volume Index 1974/1975	Unit Value Index 1974/1975	Value Index 1974/1975	Value 1974/1975 (\$ mill.)
Bauxite	91.7	88.3	157.0	138.6	127.1
Alumina	138.5	136.8	164.3	224.8	311.3
Sugar	38.8	89.4	339.6	303.6	117.8
Banana	14.8	54.4	179.5	97.3	14.4
Subtotal	283.8	107.7	186.7	201.1	570.6
Other Exports ¹	78.4	(121.3)	(116.1)	142.9	112.0
Merchandise Exports	362.2	(110.6)	(171.4)	188.6	682.6
Tourism					
(net)	94.3	n/a	n/a	91.7	86.5
(receipts)	(111.3)	n/a	n/a	(117.6)	(130.9)
(payments)	(17.2)	n/a	n/a	(256.4)	(44.1)
Other NFS (net)	15.7	n/a	n/a	108.3	17.0
Total NFS (net)	109.0	n/a	n/a	95.0	103.5

¹Volume and Unit Value data reflect comparisons of 1972 with 1974/1975. See IMF 1977, Table XXII. These estimates are consistent with the 43 percent increase in total value derived from the IBRD data.

Source: IBRD 1982, Tables 3.1, 3.3, and 3.6 except as noted above.

Table 17. Mineral Exports and Imports,
1970-1972 to 1977

	1970-1972	1973	1974	1975	1976	1977
Bauxite						
Production (vol.)	12.2	13.6	15.3	11.4	10.3	11.4
Export (vol.)	7.5	7.4	7.8	5.5	6.3	6.4
Export Unit Value	12.2	12.1	13.4	27.2	29.8	32.1
Export Value	91.7	89.4	104.6	149.6	187.5	205.3
Alumina						
Production (vol.)	1.9	2.5	2.8	2.3	1.6	2.0
Export (vol.)	1.9	2.5	2.8	2.4	1.6	2.0
Export Unit Value	73.0	69.1	106.4	135.3	148.5	161.6
Export Value	138.5	165.9	297.8	324.8	237.6	323.4
Mining Exports (\$)	230.2	255.3	402.4	474.4	425.1	528.7
Fuel Imports (\$)	46.9	72.7	195.2	215.0	203.5	225.6
(volume)	(100.0)	(83.2)	(116.6)	(119.2)	(101.5)	(91.2)
Balance (\$)	183.3	182.6	207.2	259.4	221.6	302.9
Total Imports (\$)	554.0	676.6	936.0	1123.0	913.0	747.0
(volume)	(100.0)	(83.1)	(80.4)	(83.6)	(63.9)	(49.9)

Source: IBRD 1982; Tables 3.3, 3.4, 3.5, and 7.7.

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Table 18. Exports and Imports of Goods and Nonfactor Services, 1974 to 1980

		1974	1975	1976	1977	1978	1979	1980
1974 Jamaica Dollars	X	759.0	598.1	514.4	568.7	599.4	624.4	761.5
	M	996.7	1024.2	821.3	622.2	686.4	753.6	728.5
	RB	-237.7	-426.1	-306.9	-53.5	-87.0	-129.2	+33.0
	dRB		-188.4	+119.2	+253.4	-33.5	-42.2	+162.2
Price ¹ Indexes Terms of Trade	PX	100	151.1	149.5	157.7	163.4	187.4	219.2
	PM	100	115.8	124.4	138.9	139.7	160.3	204.3
		100	130.5	170.2	113.5	117.0	116.9	107.3
Adjusted Prices	X PX	759.0	903.8	769.0	896.8	979.4	1170.1	1669.2
	M PM	-996.7	-1186.1	-1021.7	-864.2	958.9	-1208.0	-1488.3
	RB'	-237.7	-282.3	-252.7	+32.6	+20.5	-37.9	+180.9
	dRB'		-44.6	+29.6	+285.3	-12.6	-58.4	+218.8
Current U.S.	X	877.3	1045.0	897.4	975.5	1096.6	1188.1	1391.0
	M	1098.6	1311.4	1131.3	919.8	1056.2	1227.6	1414.9
	RB"	-221.3	-266.4	-233.9	+55.7	+40.4	-39.5	-23.9
	dRB"		-45.1	+32.5	+289.6	-15.3	-79.9	+15.6

¹The price indexes for 1975 based on IBRD, 1982, Tables 2.1 and 2.2.

Sources: IMF 1981, Table 54 for Price Indexes; IBRD 1982, Tables 2.2, 3.1, and 3.6. dRB denotes the change in the resource balance.

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Table 19. Sources of Adjustment, 1974 to 1980
(1974 Jamaican dollars, in millions)

	1974	1975	1976	1977	1978	1979	1980	1980/75
GDP	2,169.6	2,156.7	2,026.1	1,987.3	1,982.0	1,953.4	1,848.0	
GDP_t/GDP_{t-1}		.994	.939	.981	.997	.986	.946	.857
Domestic Demand	2,407.3	2,582.8	2,333.0	2,040.8	2,069.0	2,082.6	1,815.0	
DD_t/DD_{t-1}		1.073	.903	.875	1.014	1.007	.872	.703
Resource Balance	-237.7	-426.1	-306.9	-53.5	-87.0	-129.2	33.0	
Change from Previous Year		-188.4	+119.2	+253.4	-33.5	-42.2	+162.2	+459.1
Portion of Change Attributable to								
1. Absorption		-76.4	67.0	109.2	-12.1	-14.7	63.1	236.7
(GDP decline)		(1.4)	(26.0)	(5.8)	(0.2)	(1.2)	(6.9)	(60.9)
(terms of trade)		(-96.0)	(28.0)	(18.3)	(-7.0)	(.5)	(28.1)	(93.1)
(other)		(18.2)	(13.0)	(85.1)	(-5.3)	(-16.4)	(28.0)	(82.7)
2. Switching		-112.3	52.8	143.8	-21.9	-28.4	98.3	221.7
(expenditure)		(-85.5)	(56.5)	(131.2)	(-26.1)	(3.2)	(92.8)	(234.3)
(production)		(-26.8)	(-3.7)	(12.6)	(4.2)	(-31.6)	(5.5)	(-12.6)

Source: IBRD 1982, Table 2.2 for data on GDP and the structure of demand in constant prices.

Table 20. Changes in the Composition of Production and Demand¹
(1974 Jamaican dollars, in millions)

	1974	1975	1976	1977	1978	1979	1980
GDP	2,169.6	2,156.7	2,026.1	1,987.3	1,982.0	1,953.4	1,848.0
GDP (traded)	746.5	715.2	667.9	667.7	670.0	629.0	600.4
Agriculture	162.7	161.9	166.3	170.9	186.7	166.4	161.5
Mining	197.0	157.2	124.9	146.7	150.4	148.0	163.3
Manufacturing	386.8	396.1	376.7	350.1	332.9	314.6	275.6
GDP (nontraded)	1,423.1	1,441.5	1,358.2	1,319.6	1,312.0	1,324.4	1,247.7
Gov. Services	251.3	265.1	307.3	328.3	344.1	366.7	362.4
Other	1,171.8	1,176.4	1,050.9	991.3	967.9	957.7	885.3
Domestic Demand	2,407.3	2,582.8	2,333.0	2,040.8	2,069.0	2,082.6	1,815.0
Public Cons.	386.1	397.8	446.2	451.1	468.6	475.2	456.5
Private Cons.	1,479.6	1,505.3	1,499.0	1,467.4	1,330.7	1,231.5	1,210.0
Investment	541.6	537.9	381.4	249.5	261.1	305.9	212.5
Discrepancy	-	140.9	6.4	-127.2	8.6	70.0	-64.0
Resource Balance	-237.7	-426.1	-306.9	-53.5	-87.0	-129.2	33.0
Exports	759.0	598.1	514.4	568.7	599.4	624.4	761.5
Imports	996.7	1,024.2	821.3	622.2	686.4	753.6	728.5

¹The Discrepancy measures the difference between calculations of GDP based on value-added in production, and calculations based on the structure of demand. Since figures for exports and imports are relatively reliable, the discrepancy has been attributed to domestic demand. Exports that are unrecorded in the balance of payments data are also likely to be unrecorded in the production data, e.g., illegal drugs.

Source: IBRD 1982, Tables 2.2 and 2.10.

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Table 21. Tourism, 1975 to 1980

	1975	1976	1977	1978	1979	1980
Receipts (\$, mill.)	128.5	105.7	105.6	146.8	195.4	241.7
Payments (\$, mill.)	52.3	58.8	11.9	10.4	10.9	11.7
Net Receipts	76.2	46.9	93.7	136.4	184.5	230.0
Visitors (000)	553.2	470.7	386.5	532.9	593.6	543.1
Average Length of Stay (days)	8.8	8.6	8.7	8.5	8.8	10.2
Visitor Days	4868	4048	3363	4530	5224	5539
Gross Receipts Per Visitor Day (\$)	26.40	26.11	31.40	32.41	37.40	43.64

Source: IBRD 1982, Table 7.11.

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Table 22. Production, Exports, and Imports of Minerals,
1971 to 1980

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Value Added (J\$)										
Constant Prices	149	159	182	197	157	125	147	150	148	163
Current Prices	138	122	149	197	221	235	308	510	622	678
Deflator	93	77	82	100	141	188	209	340	420	416
Mineral Exports	235	237	255	402	474	425	529	582	581	753
(net to Jamaica)	n/a	n/a	n/a	n/a	n/a	(251)	(342)	(315)	(323)	(320)
Fuel Imports	52	56	73	195	215	204	235	194	335	470
Mineral Trade Balance	183	181	182	207	259	221	294	388	246	283
Fuel Imports (1974 U.S.\$)	198	146	139	195	200	170	159	146	180	152
Fuel Imports (barrels, net)				19.4	18.5	17.3	16.4	15.7	16.1	15.6
(for bauxite/alumina)				(9.4)	(7.6)	(6.2)	(7.5)	(7.6)	(7.4)	(8.2)

Sources: IBRD 1982; IMF 1981. Value added in J\$ (millions); next four rows in U.S.\$ (millions); last two rows in millions of barrels. Net foreign exchange to Jamaica includes royalties, bauxite levy proceeds, and local costs incurred in production.

Table 23. Value Added in Export and Domestic Agriculture, 1970 to 1980
(1974 Jamaican dollars, in millions)

Year	Export Agriculture	Domestic Agriculture	Agriculture, Forestry, Fishing
1970	39.6	50.0	149.8
1971	40.3	70.2	167.6
1972	40.5	71.5	170.7
1973	34.0	66.0	160.3
1974	36.5	70.2	162.6
1975	29.4	72.3	161.9
1976	35.9	68.4	166.3
1977	29.5	75.6	170.9
1978	33.4	90.8	186.7
1979	29.7	80.3	166.4
1980	24.6	85.8	161.5

Source: IBRD 1982, Table 2.8.

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APPENDIX I

NUTRITION, HEALTH, AND POPULATION PROGRAMS

I. SUPPLEMENTARY FEEDING PROGRAMS

A. Background

The Title I supplementary feeding program is an outgrowth of Title II government-to-government and Catholic Relief Services (CRS) donations programs for maternal and child health (MCH) and school feeding (SF) which originated in 1967. It is estimated that the \$8.7 million in donated commodities received between 1967 and 1973 fed approximately 200,000 children annually. The government-to-government Title II program expired in December 1973, and the CRS program ended in June 1974.

In 1973, the Government of Jamaica (GOJ) entered into its first PL 480 Title I sales agreement, which replaced the donations program. This Title I agreement provided blended and fortified foods, which are normally programmed under Title II, to the GOJ through concessional sales to continue the Government's school-lunch program. The agreement included self-help measures that called for programs to increase reforested acreage; improve population control; and improve nutrition among school-age, preschool, and the MCH populations.

To implement its urban school feeding program, the GOJ financed construction of the Nutrition Products Center (presently called Nutrition Products Ltd.), a kitchen facility designed to provide lunches for distribution in the Kingston, St. Andrew Corporate area. This facility began operations in April 1973 and received the first PL 480 Title I shipment in April 1974.

The transfer of the SF and MCH programs from Title II to Title I was part of a planned progression leading to outright commercial sales, which was envisioned by the framers of the Food for Peace Act. This transfer was the first of its kind to take place and was considered a real success in the annals of the Food for Peace program.

Quantities and value of PL 480 commodities for supplementary feeding programs received under Title I agreements since 1973 are shown in Table I-1.

In addition to the Title I foods provided for supplementary feeding programs, donations are received from Canada, New Zealand, and the European Economic Community (EEC). Supplementary foods are distributed through nationwide health clinics to malnourished children under 5 years old and pregnant and lactating women. Additionally, school feeding programs provide both urban and rural schools with some form of school lunch.

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Table I-1. PL 480 Title I Commodities for Supplementary Feeding Programs, 1973-1980

Year	Blended/Fortified Foods Quantity (metric tons)	Value Blended/Fortified Foods (\$ million)
1973	1,000	.8
1975	5,200	1.5
1976/1977	7,400	2.2
1978/1979	5,829	1.6
1980	5,000	1.5

Sources: USAID, "Project Paper for a Multiyear PL 480 Title I Program," December 1981; GOJ "Report on PL 480 Title I Blended/Fortified Foods," 1979.

The principal objective of the GOJ's Title I supplementary feeding program was healthier and better educated children. The GOJ recognized that the general diet is low in both calories and protein, which may adversely affect the health of growing children and pregnant and lactating women.

In 1978, the Ministry of Health (MOH) examined the nutritional status of vulnerable groups in Jamaica. The survey found a higher prevalence of malnutrition in the rural than in the urban preschoolers sampled. This was true for all categories of malnutrition: mild (Gomez I), moderate (Gomez II), and severe (Gomez III). There were also regional variations in the prevalence of malnutrition across the 13 parishes. The percentage of moderately and severely malnourished children (Gomez II and III) ranged from a low of 2.9 percent (Portland) to a high of 11.3 percent (Trelawny). Of the five parishes with the highest percentages of malnutrition, three were in Cornwall County, the most westerly county in Jamaica, which encompasses five parishes with a total population of approximately 515,000. Except for the city of Montego Bay, the county is primarily rural.

Field observations and interviews for this evaluation were conducted in Cornwall at three rural health clinics (Black River, Whitehouse, and Falmouth), a regional hospital (Montego Bay), and a rural all-age school (Salt Marsh). Direct observations by evaluation team members included food storage procedures and facilities, storage locations, food distribution, operation of a "control system" for monitoring food recipients,

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and weight charts of recipients. No food or feeding program operation was seen at the rural school, but team members spoke with an assistant principal, teachers, and some school children about the lunch program.

B. Ministry of Health Supplementary Feeding Program

The MCH feeding program targets a food supplement for preschool children from age 4 months to 5 years, and pregnant and lactating women. Food supplements are distributed through approximately 267 health clinics island-wide. In the MCH program, complementary health services including immunization, ante- and post-natal care, family planning services, and nutrition education are supplied in addition to the supplemental food. The intended recipients are categorized by nutritional status, and the ration size varies in relation to the category. Severely malnourished children (Gomez II and III) are scheduled to receive 4 pounds of food 12 times per year, while the less seriously malnourished (Gomez I) and normal-weight children's ration is set at 2 pounds of food 12 times per year. Pregnant and lactating women receive 4 pounds of food 8 times per year. The quantities of food received by the MOH for MCH feeding programs are shown in Table I-2.

Table I-2. Quantities of Food Received for MCH Feeding Programs, 1976 to 1980

Date	Soy-Fortified Flour	Soy-Fortified Bulgur	Soy-Fortified Cornmeal	CSB	Other
1976 ¹	134	299		299	340 ²
1977/1978 ³	462	275		231	400 ²
1979 ³	608	105		74	948 ²
1980 ⁴	249	150	22	149	40 ²

¹From MOH statistics.

²EEC, Canada, and New Zealand contributions.

³From 1977, 1979 self-help reports.

⁴From USAID Program Office.

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The numbers of recipients served by the MCH program as reported in the self-help reports were 111,000 in 1977, 108,400 in 1978, and 144,692 in 1979.

Costs for MOH supplementary feeding programs are estimated at \$1,143,000 for 1979. Approximately one-half of this amount was used to acquire the commodities; the remainder was used for administrative and operational expenses. The Child Feeding Services (CFS) budget of \$200,000 is included as a line item in this budget. CFS is responsible for the manual repackaging and transportation of commodities to the rural warehouses and health clinics. Based on the budget and the 1979 self-help report on the number of recipients served (144,692), the cost per participant would be approximately U.S.\$7.90.

The 1980-1981 "Report of Activities of the Nutrition and Dietetics Division" estimates clinic attendance at less than 30 percent of the total child population. The GOJ report for FY 1979 gives a figure of 90,850 recipients and points out that the average daily number of recipients is difficult to compute because of irregular patterns of attendance.

Logistics problems are encountered throughout the distribution system, from the initial receipt of commodities in Kingston to their final distribution to recipients. Upon arrival, commodities are cleared by the Central Foods Organization and then forwarded to the two MOH warehouses in Kingston. From these warehouses, commodities are sent to three rural warehouses at Montego Bay, Williamsfield, and Port Antonio, where they are distributed to the health clinics throughout the country. MOH staff members indicate that there are only two trucks for deliveries to rural areas and that one of them is often out of service. Most health centers do not have adequate storage facilities and losses occur from insects, rodents, and unauthorized diversions of commodities. Inspectors from the Ministry of Industry and Commerce, Storage and Infestation Division indicate that insect and rodent problems can be controlled at the warehouses. The major problems occur at the physically inadequate health center storage sites. The Health Management Improvement Project is addressing this problem through the renovation of 65 health centers. Fifty-seven additional health centers are being constructed and equipped under the World Bank's Second Jamaican Population Project (JPP II).

Discussions with nutritionists and health officers in the rural areas uncovered a belief that "the system has gone haywire." Efforts are under way to establish a system of controls for the receipt and distribution of the food. Under the new system, a paper chit given to the recipients by the examining nurse serves as a "prescription" for a given quantity of food. Prior to the implementation of the system, any clinic

attendee could get food. The quantities given were based on food availability, subjective perceptions of need, and friendship patterns in the community, rather than on the established ration size for a given nutritional status. The health officer and nutritionists who were interviewed are committed to implementing a control system and have communicated their position to staff at the health clinics. At a rural clinic that was visited by team members, a community health aide was cutting slips of paper so that the staff nurse could write "prescriptions" for the food before it was distributed.

However, recordkeeping at the clinic level is often non-existent and the lack of adequate nutritional statistics makes an impact assessment of the MCH supplementary feeding program virtually impossible. Two recent surveys have examined the nutritional status of a sample preschool population and made comparisons with data from a 1970 survey. Results of the comparison are shown in Table I-3.

Table I-3. Nutritional Status of Sample Preschool Population Based on Standard Weight for Age, 1970 and 1978 (percentage by category)

Year	Nutritional Status			
	Gomez III	Gomez II	Gomez I	Normal
1970	1.4	9.4	39.0	50.2
1978	1.0	6.8	30.5	61.7

Source: "Nutritional Status of Vulnerable Groups in Jamaica 1978," MOHEC.

Although there was an MCH feeding program serving an estimated 68,000 preschool children in 1978, the survey did not identify those children as a separate group. Since there had been a concerted effort in the 1970s to reduce the prevalence of malnutrition through a variety of programs in agriculture, housing, and health, no conclusions can be drawn from the above data concerning the role that supplementary feeding programs played in changing nutritional status.

The Nutrition and Dietetics Division of the MOH compared the nutritional status of children under 5 years old who were seen at health clinics between January and March 1980 with-

those children seen between January and March 1981. There were no significant differences in nutritional status between children surveyed in 1980 and those surveyed in 1981.

There were, however, significant differences between the results of the 1978 National Nutrition Survey and the results of the 1980-1981 surveys. The implication of these results is that the nutritional status of the average preschooler improved between 1978 and 1980.

Since the surveys examined different populations (clinic goers versus households), caution should be exercised in attributing a cause to the differences found. Clinic attendance is low (less than 30 percent of the estimated child population), and there is no certainty that the clinic population is representative of the population at large. Further, it is felt that many malnourished children are never seen at the clinics, and clinic data are, therefore, taken from the better nourished children. Table I-4 shows the results of the 1980-1981 survey and the comparison with the 1978 data.

Table I-4. Nutritional Status of Children
Attending Clinics, January-March 1980-1981,
(percentage by category)

Period	Nutritional Status			
	Normal	Grade I	Grade II	Grade III
January-March, 1980	75.3	20.8	3.5	0.5
January-March, 1981	73.7	22.0	3.7	0.6
1978 National Nutrition Survey	61.1	31.1	7.0	0.9

Source: "Report of Activities of the Nutrition and Dietetics Division, 1980-1981."

Changes in nutritional status (hence, impacts) may be difficult to ascertain given the present ration size and method of distribution. Depending on their nutritional status, each recipient receives either 2 pounds or 4 pounds of food per month. This ration represents either 30 grams or 60 grams per day. Using commodities with an average value of 360 kilocalories per 100 grams and 15 grams protein per 100 grams, the

30-gram and 60-gram rations provide 108 kilocalories per day and 216 kilocalories per day, respectively. The two rations also provide 4.5 grams and 9 grams of protein per day, respectively. These rations, even if received regularly, would provide little of the calorie requirement recommended for people in the Caribbean region.

Public health nursing staff and the field nutritionists cited the unreliability of food shipments. At the clinic level (Whitehouse), only two food shipments have been received since November 1980, and clinic staff have little idea how the needs of the program are determined. A rural public health nurse indicated that even though clinic attendance increases when food is being distributed, the food is an unreliable resource and should not serve as an incentive to bring people to the clinic. People should be motivated to attend the clinic by the services available, and not by the presence of food.

The field nutritionist indicated dissatisfaction with the distribution system all the way from the Central Foods Organization in Kingston to the procedures for distribution to the recipient. He stated that only one shipment in four months had been received at the rural warehouse. The nutritionist allocates food for shipment to the parishes; when the food arrives, there are often shortages. When asked "what if there were no food?" the nutritionist reiterated the often-heard statement that clinic attendance increases with the presence of food. He stated, however, that if the food distribution program were phased out over a two-year period, small agricultural projects could be encouraged and implemented to cover the shortfall.

In addition to the constraints imposed on the program by logistics problems resulting in intermittent deliveries of food, two further constraints have been identified in take-home feeding programs. First, a supplementary ration may be serving as a replacement or substitute for foods normally consumed; and second, there may be a ration "leakage" in that the ration is shared by other family members. A 216-kilocalorie ration shared with three other family members provides only 54 additional calories for the recipient. Improvements in nutritional status are difficult, if not impossible, to obtain with so small a supplement.

The problem of intrafamily distribution of a take-home ration has been widely recognized in supplementary feeding programs, and various approaches have been offered to address the problem. Recognizing that the malnourished child is only one member of what may be a marginally nourished family, some programs have used the food package as an income supplement to the family. Studies have shown that, on the average, the targeted child receives somewhat less than one-half of the supplemental ration. Some feeding programs have doubled the ration size to compensate for "leakage" to the family.

Health clinic staff recognized that even though the quantities are small and may not represent any significant income or nutritional supplement to the recipient family, the food package still appears to serve as an incentive for the family to use other clinic services. While the supplement itself may not be significant in improving the health or nutritional status of the recipient, it is possible that clinic attendance does have that effect.

In cases of severe malnutrition, a specific, targeted ration of milk powder and butter oil to reconstitute the milk appears to have a beneficial effect on the recipient. It is difficult to assess the effects of either this tightly targeted supplement or of the take-home distribution, because there are such sparse data. Efforts are presently under way to improve nutritional surveillance and to accumulate better data on health and nutritional status.

C. School Feeding Programs

1. Urban School Feeding Programs

Although the Ministry of Education (MOE) has responsibility for the total SF program, Nutrition Products Ltd. (NPL) administers the urban program in the corporate area (Kingston and St. Andrew). During the period 1976-1980, NPL provided soy-fortified, meat-and-bulgur-filled patties and half pints of milk to between 40,000 and 70,000 urban school children daily. From 1977 to 1979, the number of schools served rose from 116 to 205. Nonfat dry milk was reconstituted with vegetable oil into whole milk and distributed in half-pint cartons. Patties, made of soy-fortified flour with a bulgur/meat/vegetable filling, each provided approximately 400 kilocalories and 10.2 grams of protein at a production cost of 31 cents each.

Recently NPL has shifted to the production of a "nutribun" similar to that used in the Philippines school feeding program. The nutribun is estimated to provide approximately 400 kilocalories and over 10 grams of protein, and is being distributed to about 85,000 schoolchildren at 250 schools in the Kingston, St. Andrew Corporate area. The present NPL budget is J\$3.4 million for the 85,000 children per day that are served. On the basis of 180 feeding days, the cost per lunch (milk and bun) is 22 cents. The milk is distributed free and 5 cents is charged for the bun.

NPL would like to expand coverage, but logistics problems are presently holding it back. NPL has 16 trucks to cover all

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the schools in the area and many drivers average 15 stops a morning.

NPL has experimented with a quart container for the milk, because the savings on container costs are significant. There are some difficulties in using a quart container (children forget cups, someone must distribute the right quantity) and NPL is reevaluating its use.

At the request of NPL, a two-stage evaluation was made between September 1977 and June 1978. The evaluation was conducted in nine primary or all-age schools, and the same schools and children were assessed at each stage of the evaluation. Three groups of schools formed the sample:

- Case Group--Schools not receiving food at the first assessment but added to the school feeding program approximately 1 month later:
- Control Group 1--Schools not participating in the school feeding program
- Control Group 2--Schools which had been in the school feeding program and remained in the program throughout the evaluation

Results of the study indicate that there are no significant differences in nutritional status between the two control groups. Differences between the control groups and the case group indicate more improvement in the case group over the period of the study. The conclusion reached is that the school feeding program appears to have a positive impact on consumption patterns and nutritional status when it is first introduced in a school. The effects appear to diminish over time so that the nutritional status of children in schools which have been in the program for a long period is not significantly different from that of children not in the program.

To maintain present levels of participation, the program may need to provide greater variety in what is supplied. NPL officials have discussed the possibility of extending the nutrition program into more rural areas as a replacement for the rural lunch program. Administrators at a rural school indicated that this would probably not be acceptable since their children were used to "food" at lunch. In this context, food refers to root staples, stew, or dumplings. NPL should carefully assess the acceptability and the logistics issues involved before extending the program into the rural schools.

2. Rural School Feeding Program

The rural school feeding program is operated directly by the Ministry of Education. Commodities are cleared upon arrival by the Central Food Organization and are then disbursed to three warehouses. Pechon Street in Kingston serves the schools in the eastern parishes while Falmouth and Williamsfield (Mandeville) serve the remaining rural parishes. Transportation logistics are not as severe a problem as they are for the MCH program, since deliveries for the rural school feeding program are contracted for when commodities arrive.

The commodities are supposed to be delivered to the schools in quantities sufficient for the term. Poor storage conditions at the schools, however, preclude long-term storage. In some cases, school personnel pick up commodities weekly from the regional warehouse. An assistant principal indicated that the principal used his personal automobile to bring commodities from the warehouse. Because the principal was on leave at the time of the site visit, no food was transported. The assistant principal pointed out that this was the best time for the principal to be gone because there was no food in the regional warehouse. The additional costs in lost personnel time and fuel could not be calculated. Officials concede that there are storage problems and have mentioned insect and rat infestation, spoilage, and burglary as prevalent problems.

For each recipient, the program is intended to provide one meal per day for 180 days and to supply one-third of the school-child's minimum daily requirement (MDR) of protein and calories.

The food is viewed as a supplement to the foods provided for hot lunches at the rural schools. The schools receive grants from the MOE for equipment, utensils, and local food purchase. The local food-purchase grants are augmented by a charge of 30 to 50 cents per child eating lunch, if the child can afford the cost.

Estimates of participation rates in rural school feeding programs range from 50,000 to 90,000. A recent survey of the school feeding program indicated an overall pupil participation rate of 17 percent. The participation rate varied in different types of schools and in different parishes. Participation ranged from 6.1 percent in new secondary schools (pupil age: 12-17 years) to 28 percent in infant schools (pupil age: 4-6 years). Parish averages range from a high in Hanover of 25 percent, to 13 percent in St. Catherine. There has been no attempt to assess the impact of this program on either attendance or nutritional status of the participants.

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Ministry of Education officials indicate that the program is presently serving about 115,000 students in 1,611 schools. The annual budget for the rural school feeding program is J\$2.9 million, yielding a cost per student of approximately 14 cents per day for 180 days. The student contribution adds between 30 and 50 cents per participant to this figure and represents a greater contribution than the MOE grants to the school. Examination of intake and expenditures at one rural school for the previous term showed that, on the average, weekly income from contributions exceeded funds provided by the MOE by a small percentage. Any excess funds are used to cover shortfalls occurring near the term end so that some lunches can still be provided.

Timing of agreements, logistics, and distribution problems have an impact on the regularity of the program at any given location. MOE officials indicated that teachers report that if there is no food served at the start of the school term, attendance will be very low. Discussions and observations at a rural school did not confirm this viewpoint. Although the school was in the second week of the term and no food had been served, school personnel stated that school attendance was still high.

Often there are no supplementary foods available if either the PL 480 Title I shipment or EEC shipments have not arrived. Local school officials indicate that preparation of a meal without the PL 480 or EEC supplement is not cost-effective and, therefore, is often not done. Without the PL 480 supplement, the quantity of food available is diminished. The school may not be able to bear the cost of additional purchases to cover the shortfall. If EEC foods are not available, high-cost items (such as butter oil and nonfat dry milk) used for preparation and consumption would have to be purchased locally. MOE officials are aware of these problems and attempt to hold off deliveries until both shipments (PL 480 and EEC) can be provided. This often causes temporary suspensions in feeding programs at some rural schools. Mission personnel have stated that some schools rarely receive supplementary foods, and their school lunch programs are operated solely through local self-help efforts and the cash grants from the MOE.

Jamaica has had some type of school feeding program since 1926. In view of the logistic and distribution difficulties facing the program, the low rates of participation, and the lack of demonstrable impact, it is possible that alternatives to the present method of operation need to be explored. The rural school feeding program consumes approximately two-thirds of the commodities supplied for all supplementary feeding programs (MCH, Urban and Rural School Feeding). If the average cost of commodities supplied is \$350 per metric ton, and some 2,000 metric tons are allocated to the rural program, overall commodity costs are approximately \$700,000. If this quantity

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of commodities were included in the regular Title I sales program, the funds generated from the sales could be earmarked for the rural program. Depending on what is purchased, sales could generate a maximum of J\$1.2 million for additional MOE food purchase grants.

It is clearly easier to move funds than to move and store quantities of food. Furthermore, the injection of additional demand for locally produced foods could conceivably stimulate local production. This alternative should be examined because the present program faces severe operating constraints.

II. CONCLUSIONS AND RECOMMENDATIONS

A. General

It has been pointed out that the presence of a supplementary feeding program within a Title I program is a unique situation. As such, it presents difficulties in administration that go beyond the normal difficulties faced by Title II supplementary feeding programs. Title II programs have a sponsoring agency (such as Care or CRS), which is responsible for the monitoring and administration of all of its county programs. This single agency does not exist in the Jamaica Title I supplementary feeding programs. Responsibility is diffused across several ministries which are essentially independent, with no overall coordination. Furthermore, it does not appear that any single entity involved in the program has assumed this overall responsibility for total program operations.

Without a central repository of information, it is difficult to make assessments of the program operations. If the supplementary feeding program is to continue in its present form, much greater responsibility will have to be taken, probably by the USAID Program Office, for the overall monitoring of program operations and their consequences.

Assuming that the supplementary feeding program is continued, serious consideration should be given to changing the commodities in use. Soy-fortified flour, cornmeal, and bulgur contain more protein than the unfortified commodities, but are also more costly. Nutritionists in the MOH have stated that there is adequate protein in the recipients' diets. What is needed is simply more food supplied on a regular basis. The blended and fortified foods, aside from being more costly, also have a shorter shelf-life than the unfortified foods. Shelf-life has been identified as a problem when there are only two or three commodity shipments per year. Changing to unfortified commodities could increase the total quantity of food by 8 percent to 10 percent, with no increase in cost to the program.

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B. MCH Supplementary Feeding Programs (MOH)

The MCH supplementary feeding program has not been able to demonstrate any improvement in nutritional status of recipients as a consequence of food distribution. Food distribution methods are unreliable, and the quantities per recipient are small and are not regularly received. Even if the logistics problems of delivery and distribution were resolved, the issue of intrafamily distribution of food would remain. Presently, there are no mechanisms in the program for controlling the distribution of foods within households. Health workers in the clinics state that very specific targeting of a milk/butter oil supplement for severely malnourished children contributes to improvement in their nutritional status. Indeed, there may be overall improvement in the health of the recipient population due to clinic attendance, but there are no data that confirm this possibility.

Clinic staff, field nutritionists, and an MOH senior nutritionist all express reservations concerning dependence on an unreliable resource for either improving nutritional status or for use as an incentive to draw people to the clinics.

Before continuing the program, a careful study should be made to determine the relationships among feeding, clinic attendance, nutritional status, and health. A simpler approach would be to strictly limit the scope of the program to the severely malnourished and target recipients through the choice of foods and an improved system of controls on their distribution.

C. Urban School Feeding Program (NPL)

The urban school feeding program operated by Nutrition Products Ltd. in the Kingston, St. Andrew Corporate area appears to be reasonably effective in reaching a large population (85,000) at a fairly low unit cost (22 cents minus 5 cents charged the participants). A recent survey, however, indicated that there were no differences in nutritional status between children at schools where there were school feeding programs and children at schools where there were none. Some changes were observed when feeding programs were first introduced to schools. The interpretation of these findings is that individual participation in lunch programs appears to decrease over time. It is possible that introducing a greater variety of foods into the urban school lunch program would keep participation high. Introducing variety, however, can be expected to increase unit costs.

There is presently some discussion about expanding the urban program into rural areas. The issues of participation and dropout rates should be resolved before any planned expansion is implemented. Further, the MOE and NPL should explore the constraints on expansion imposed by logistics and acceptability of the product.

D. Rural School Feeding Program

The MOE rural school feeding program faces severe constraints imposed by timing, distribution, and storage of food shipments. Unless the GOJ is willing to undertake a large infrastructure improvement, serious consideration should be given to alternatives to the present program.

A possibility which would minimize the constraints facing the program would be to have the commodities in use integrated into the overall Title I sales program and to have the local currency generated from the sale of those commodities earmarked for the rural school feeding program. These funds would augment the MOE budget for local food purchase grants, be easier to control than the transport and storage of food, and probably serve the dual purpose of providing a more reliable school feeding program while creating an increased demand for locally produced foods.

Regardless of how the program is continued, MOE and the Mission must assume a greater management role. Using the proceeds of sales for future purchases would appear to require a far smaller management and monitoring effort on the part of all those concerned than the present program requires.

III. SELF-HELP MEASURES

A. Nutrition Self-Help Measures

The 1975 and 1976 PL 480 agreements contained a self-help measure in which the Government of Jamaica (GOJ) agreed to:

Strengthen, expand, and improve the nutritional aspects and the preparation and distribution of foods in the schools, pre-school and maternal and child health programs through the Nutrition Products Center (NPC) and other local facilities.

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The agreements further stipulated that the currency generated from the sale of commodities be used for financing the self-help measures, and specifically mentioned the School Feeding program.

The 1975 self-help report response to this provision is primarily an account of the operations of the NPC, detailing its levels of production and coverage. Coverage figures are also given for the rural school feeding program and the Maternal and Child Health (MCH) program. A statement was included that all of these programs used PL 480 Title I foods in conjunction with local foods and nonfat dry milk from Canada.

A report of coverage does not indicate what activities were undertaken to "strengthen, expand and improve ... programs." Although a budget figure is given for NPC operations, there was no indication of the level of support derived from local currency generations.

The 1977 self-help measures called for the initiation of plans for nutritional projects directed at school, preschool, and MCH programs. The 1977 self-help report describes the operation of the programs and provides input (commodities) and output (recipients) information. Specific plans mentioned in the report include a health education program to promote breast-feeding and a Ministry of Health (MOH) plan to evaluate the improved nutritional status of recipients.

In the 1978 agreement, two self-help measures were specifically directed at gaining a greater understanding of the operation and impacts of the MCH and school feeding programs. One self-help measure called for an evaluation of the nutritional impact and management efficiency of the MCH program while the second measure asked that the findings of the school feeding evaluation be implemented.

The 1978 self-help report describes the MCH program and reports on an MOH national survey on nutritional status. Because the national survey was unrelated to the MCH feeding program, its inclusion in the self-help report should have been clarified. The report indicated that the MCH evaluation was scheduled for January 1979. To date, there has been no evaluation of the MCH program to assess its nutritional impact or management efficiency. The 1980-1981 surveys of the nutritional status of clinic attendees showed no significant changes, and the inappropriateness of comparing the survey with the 1978 National Nutrition Survey has already been commented upon.

The 1979 self-help reports did not address the previously raised question concerning either the MOH or school feeding

evaluation. Presently, an evaluation and redesign of the MCH supplementary feeding program is included in the Health Management Improvement Project (#532-0064).

B. Population/Family Planning Self-Help Measures

Population control and family planning programs have been high priority activities for the Mission and the GOJ since the first Title I agreement in 1973. The population/family planning self-help measures undertaken by the GOJ have been directed toward strengthening the National Family Planning Board (NFPB) so that it can carry out national family planning and population programs. The self-help measures specifically call for a comprehensive evaluation of the National Family Planning Program and the development of a comprehensive and integrated population and development policy.

GOJ efforts to strengthen the NFPB led to an integration of the NFPB into the Ministry of Health. Family planning activities were stressed in the clinics, and community health aids (CHA) were given family planning training. Family life education was introduced into the school curriculum, and contraceptive distribution expanded through both public and private channels. Recently, the NFPB has been separated from the MOH and has become an independent entity.

The evaluation of the National Family Planning Program culminated in the population policy conference, from which came a Ministry of Health statement of national population policy. The NFPB is the principal vehicle for coordinating and implementing the population policy of Jamaica. Five major areas are being supported: (1) information, education, and communication; (2) medical services; (3) contraceptive distribution; (4) research and evaluation; and (5) strengthened human resources.

The NFPB is in the process of opening and staffing 15 island-wide family planning clinics which will separate family planning services from MOH clinics. Planned for the clinics are programs in venereal disease control, counseling, contraceptive promotion, and data gathering for monitoring family planning efforts.

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APPENDIX J

EDUCATION SECTOR SELF-HELP MEASURES

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I. INTRODUCTION

The first self-help measures in the education sector in the FY 1975 to FY 1980 PL 480 Title I agreements appeared in the agreement signed on August 2, 1978 (later amended several times to carry an expanded program into 1979). The agreement listed 13 self-help measures; these concerned soil conservation, small-farming systems, fisheries, housing, food self-sufficiency, family planning, health planning, nutrition, and food handling.

With respect to education, the agreement required the Government of Jamaica (GOJ) to "provide financial support for rural primary schools to continue development of the curriculum with an agricultural bias and train teachers through in-service training to implement the revised curriculum." Furthermore, the GOJ was to provide adequate personnel and financial support for agricultural and vocational schools and rural continuing education centers.

In 1980, the first condition was basically repeated ("adequate support" was substituted for "financial support") and direct references to agricultural and vocational schools were dropped.

It may be assumed that the inclusion in FY 1978 to FY 1980 of references to rural primary schools was intended to ensure continued support for the ongoing AID Rural Education School Loan and, specifically, to facilitate the flow of counterpart funds required for the project; the Title I local currency generations were, in fact, expressly allocated to the activity. Similarly, the AID project included the development of agricultural vocational schools. It is unclear why the earlier reference to them was dropped in the 1980 agreement.

The GOJ submitted self-help reports for 1978, 1979, and 1980 which described those activities which were thought to evidence compliance with the self-help measures. The 1978 submission, essentially a highly abbreviated progress report, provided several paragraphs summarizing the status of progress under the AID loan, reporting, for example, that the Elim Agricultural Vocational School was open. Mention was also made of anticipated progress under a World Bank loan and of steps taken by the GOJ itself.

The 1979 report provided a more elaborate description of the AID project's status, and although it noted implementation delays, it nonetheless conveyed the impression that progress was being made. It was more precise than the 1978 report, in that it dealt separately with each of the two self-help measures. It did not restrict itself to reporting on the progress

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of the AID loan; it also described a Dutch grant to extend a training center (the activity was to be implemented later).

The 1980 report provided only a page of information--a perfunctory statement on one or two items. It was not framed in terms of the self-help measure itself ("provide financial support") but reported that questions of financial flows were presumably being followed through direct project monitoring by the Mission on a regular basis. Given the general nature of the conditions, and the abbreviated reports on compliance, the team decided to look at selected elements of the education self-help measures. Therefore, we focused on agricultural vocational education, curriculum reform, and teacher training.

The reference point was the AID project, reviewed in Washington in 1974, and signed in November 1975 (\$9 million to support a \$20.1-million project). The project involved activities in five areas: continuing education, rural primary education, rural secondary education, teacher training, and management planning. The project's overall goal was to improve "the opportunities and the quality of life in rural areas." Improvements in rural secondary education were to be made in agricultural vocational training; the goal was to provide skilled farmers and agricultural workers and trained semiprofessionals for Ministry of Agriculture programs, other Government agencies, and the agro-marketing sector.

II. AGRICULTURAL VOCATIONAL EDUCATION

To examine the impact of the Government's efforts in agricultural vocational education, team members consulted with Ministry of Education personnel and visited one new vocational school--Elim.

Elim has operated for almost three years and cost about \$4 million to build. Approximately 200 male and 100 female students are enrolled; entrants are from 15 to 17 years old. The three-year course stresses agricultural-skills training but also includes core subjects (English and mathematics). The school is residential and provides some living quarters for faculty members.

The school is reasonably well equipped and includes laboratories; a library; and facilities for housing chicken broilers, sows, and dairy cattle. Potentially available farm acreage totals 225. However, 60 acres are currently useless because of poor drainage, and another 55 will not be transferred for school use for many years.

We made the following observations at Elim:

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1. The Director, who had just left his post, had played an important role in the progress that was made. His replacement will heavily influence the institution's future.

2. The school was located on a site with significant water-supply problems. Without an assured supply of water, the students' demonstration crops die, and they learn only the harshest lessons. Apparently, there is a plan to install piping which would correct the problem, but whether the GOJ will make the funds available soon is uncertain. AID may have had some leverage in this matter in the 1978-1979 agreement (provide "financial support" for this school), but this may not be true now.

3. The costs per student may be very high. If the 1982 budget is about J\$1.2 million, then after taking into consideration the profits reaped from the sale of school-grown produce, the cost per student to graduate may be J\$12,000, or U.S.\$7,000. This cost should be considered in the light of the graduate's anticipated employment opportunities.

4. In fact, the meager employment data are not encouraging. Perhaps 40 percent of the young men in the first graduating class were still unemployed at the time of our evaluation. Of those employed, a large number were estimated to be teaching in primary schools. Few have turned to farming, but we were told that this may be in part due to the fact that a supplementary credit program to set up farm plots--for which the graduates would have been eligible--did not materialize. Unemployment among female graduates appears to be worse. Perhaps 60 percent are unemployed. However, some have found employment by working as seamstresses in their homes. However, the school has virtually no information on graduates from the June 1981 class, although it was suspected that rates of employment would be very low, since it is traditional for young people in Jamaica to give themselves an "extended vacation" after secondary school.

5. We believe that the school must concentrate its efforts not only on followup surveys to learn about the employment opportunities for its graduates, but must also be aggressive in attempting to place graduates--in the Ministry of Agriculture, in schools of higher learning, in the private sector, or in other ministries, as appropriate. We did not explore the extent to which this is now done; whatever the current level of effort, however, it seems to warrant an increase, given the available employment data.

6. We believe that careful consideration of the cost-effectiveness of maintaining a coeducational school is warranted. Given the heavy orientation of the curriculum toward agriculture, and the limited employment opportunities for

girls, we wonder whether in a time of scarce resources, training in home economics could not be provided as effectively and more inexpensively in other ways. In this regard, the manpower analysis in the AID Project Paper appeared to be restricted to considerations of needs for male agricultural skills. It is unclear why one-third of the student body comprised girls studying home economics.

7. There appears to be a danger of placing undue emphasis on making the school productive in terms of growing and selling farm produce rather than training skilled graduates. The students have a very long day, working in the fields for 90 to 120 minutes six days a week. After a full day of classes and "farm practice," they have a three-hour study period. While the sale of produce reduces school operating costs, it could begin to dominate the activities of the students (who receive no remunerations for their farm labor).

8. The location of Elim involves problems in recruiting and retaining faculty. Elim is isolated, and this creates problems for the faculty in finding opportunities for supplementing income. Furthermore, the isolated location requires traveling several miles to Santa Cruz where faculty children go to school. The isolation also means that faculty members are often bored. The retiring Director thought salary increases or some sort of "hardship pay" might ease this problem. Certainly, an inferior faculty could jeopardize the future of this expensive and valuable educational facility.

9. Given the apparent high cost of training, the student body should perhaps be of higher quality. While only 15 percent of those who submit applications are finally admitted, the superior students attend the grammar schools and the technical high schools. We have no suggestions on ways to raise the quality of the student body. Perhaps if it appeared more clear that matriculation at Elim led to important, remunerative jobs, the school's drawing power would increase.

10. Finally, the GOJ must not try to economize unduly in the school's early years. Needed physical facilities (such as an assured supply of water) must be provided. Better efforts must be made to recruit quality faculty. And if the school's aspirations for its graduates are not kept high, then the entire venture may prove too costly in the long run, relative to its benefits to society.

III. RURAL PRIMARY EDUCATION--CURRICULUM REFORM AND TEACHER TRAINING

Salt Marsh All-Ages School in the northwest part of Jamaica was visited to examine the impact of the curriculum-

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reform and teacher-training components of the sector program. (Apparently, Salt Marsh was not being used as a center for continuing education, as was anticipated when the loan project was designed, but we did not pursue this question since it was beyond the scope of the self-help measure.)

Salt Marsh was one of the six pilot schools selected under the project where a revised curriculum, more relevant to the community, would be developed, and where teachers would be trained in its purpose and use. Furthermore, the physical plant of the school was to be upgraded.

These plans were completed. On the basis of curriculum development work in the pilot schools, primary curriculum materials have been produced for grades 1 through 6 and, we were told, are being distributed for use in schools throughout the island. A cursory examination of the grade 4 materials impressed us. Teachers in Salt Marsh did receive training in the new curriculum (we do not know the intensity or frequency of the training), and we were left with the impression that training should continue through such methods as workshops and conferences.

The addition of two and one-half rooms eased the school's overcrowding problem considerably, although the problem is still significant. One of the new rooms initially planned for a library has been converted into a classroom, and the library is located in a smaller room--originally a storeroom (the facility is adequate as a repository for books, but not as a study area). Another room, designed as a workroom, has become a classroom.

In addition, the school receives electricity and equipment (such as desks and chairs) was supplied.

Several levels of impact were explored.

1. The impact on the pupils and teachers from the reduced overcrowding is positive, and presumably contributes to longer student attention spans and a calmer learning environment. Several teachers affirmed that conditions had improved. Still, it appears that the majority of the student body works in overcrowded conditions such as in one fairly large room, inadequately partitioned, where the noises from several ongoing classes mingle to produce a disconcerting din.

2. The curriculum reform allows and encourages teachers to make the schooling more relevant to the lives of the students, who in Salt Marsh live in a community dependent largely on fishing and, to a lesser extent, wood carving. Problems in the effective use of the curriculum may be more a product of the quality of rural primary school teachers, who may be unduly

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fearful of, or resistant to, changed methods of instruction which call upon them to make innovations, rather than a product of the curriculum itself. We were told that the pilot testing of the curriculum demonstrated the capability of the average teacher to adapt the primary curriculum to the specific school environment. This should be monitored over time. The upcoming comprehensive evaluation of the AID loan may shed light on this area. The difficulties of teachers in adapting the curriculum is compounded when they are not native to the area in which they teach. One long-time teacher in Salt Marsh highlighted this as a serious matter. However, since we were advised that teacher turnover rates are low, and the level of teacher commitment and interest is high, we think this problem can be overcome in time.

3. Other developments may be noted, but not easily attributed to the changes in the Salt Marsh educational system. School attendance has been rising gradually, from 299 in February 1979, to 347 in September 1981. This may reflect migration in and out of Salt Marsh, or the state of the Jamaican economy generally, rather than community perceptions of the quality of the school.

We were told that there has been an increase in the number of students graduating from Salt Marsh who are entering secondary schools. Again, it is not easy to attribute this to improvements in Salt Marsh.

There are no test data which measure achievement of students before and after the curriculum changes, teacher training, and physical improvements, so it is not possible to make judgments about impact on learning. Studies could be conducted that examine the scores achieved on the tests taken to enter secondary school, to see whether there is a significant rise in performance.

In summary, there are no reliable indicators of impact on performance. One articulate and thoughtful teacher who had been connected with Salt Marsh for 10 years said that she noted significant improvement in the educational process, and that the overall quality of the teachers had improved. We accept this assessment. We think, based not on any successes or lack of success at Salt Marsh but on our own perceptions of what is important to development, that a dynamic, stimulating rural educational environment is generally an important element of rural development. We think that continuing emphasis should be placed on training teachers, improving physical facilities, rewarding teachers with pay commensurate to the hardships of the rural posts in which they serve, and upgrading the quality of this essential aspect of rural life.

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APPENDIX K

AGRICULTURE SECTOR SELF-HELP MEASURES

I. INTRODUCTION

The self-help measures related to the agriculture sector, like those of other sectors covered by the PL 480 Title I agreements, fall into two categories: those that embody general development objectives and those that are project specific.

It had been the team's intent to visit several project sites suggested by the Mission to derive an impression of the efficacy of the efforts to meet the self-help measures. Logistical and timing problems, however, allowed us to visit only the joint Netherlands-OAS-Israel OASIS project, which has often been cited as a model approach to reversing rural-urban migration through a modified moshev system of farming. This project involves host-country contracting exclusively, which we considered significant to our evaluation, because this is the general contracting mode undertaken in non-AID projects. In addition, our visit to this project was valuable in that the Mission was interested in getting our impression of other donor projects mentioned in the self-help reports as satisfying some aspect of the self-help measures.

Although we visited only the one project site, we were also able to review some of the literature available at the Mission. In particular, we found the evaluation of AID's Second Integrated Rural Development Project done in September 1981 to be both interesting and useful.

II. SELF-HELP MEASURES

In general, five agriculture sector-related self-help measures appeared most frequently as part of the PL 480 agreements for the period under consideration. Although others may have appeared once or twice during this period, the five discussed below reflect the central problems and deficiencies affecting the agriculture sector and, even if slightly reworded, appeared in almost all of the PL 480 agreements during the FY 1975 to FY 1980 period.

The agriculture sector self-help measure which appears in every PL 480 agreement we reviewed (from October 1973 to August 1981) refers to the objective of increasing the production of local food crops, whether through Operation GROW, the Emergency Production Plan, or other efforts.

Two other self-help measures appeared frequently during this period and were related to complementary aspects of the problem of domestic food production shortfalls. One, although

listed under the health and nutrition sector self-help measures, reflected the continuing problem of postharvest losses and spoilage. It called for dissemination of information on the storage and handling of food commodities, along with improving the storage, handling, and distribution of these commodities throughout the country. The other called for Ministry of Agriculture support to programs to increase the effectiveness and efficiency of the agricultural marketing system.

The fourth self-help measure which also appeared often essentially encompassed the above-mentioned concerns into one overarching measure. It called for the Government to bolster the Ministry of Agriculture's capacity for planning, especially as related to agricultural policy and to the design and implementation of projects addressing identifiable constraints on the rural poor.

The fifth self-help measure, which first appeared in the 1978 agreement and was included in all agreements through 1981, called for continued support for soil conservation and the development of farming systems to maximize the economic productivity of small farms. This measure is clearly related to the Mission's Second Integrated Rural Development Project, which was cited in one of the Government's annual self-help reports as representing the primary pilot effort in these areas.

In response to these self-help measures, the annual self-help reports for 1977 through 1980 detail efforts involving activities, or studies preparatory to activities, in such areas as land settlement, irrigation and other infrastructure, research and extension, credit, and soil conservation. In addition, the Government reported the reorganization of various functions within the Ministry of Agriculture, the training of selected personnel, and the modification of institutional arrangements to more adequately and efficiently respond to the planning and implementing responsibilities of the ministry.

A. Domestic Food Production Increases and Marketing Improvements

In spite of the above efforts, it is evident that the Jamaican agricultural sector was, and is, faced with structural (and, possibly, cultural) constraints which may be difficult to overcome. Jamaicans today appear to have dietary preferences which are strongly biased toward imported foods. This is probably derived from the situation in existence since the early 1900s, in which Jamaica's agricultural sector concentrated on the production of export crops, primarily sugar and bananas. At the same time, most of the food consumed was imported and

consisted of staples such as rice, corn, and wheat, along with saltfish and other, more exotic foods.

These foods, most of which continue to be imported, are now considered by most Jamaicans (including at least some planners within the Ministry of Agriculture) to be part of the country's traditional diet. As a result, dietary and cultural patterns make it necessary for the Jamaican economy to be more import-dependent than might be economically advisable, at least insofar as food is concerned.

Contributing to this situation is the fact that domestic food production was not pursued to any great extent until the early 1960s. In the mid to early 1970s, however, while export-crop production continued to make up a significant portion of the agricultural sector, the rate of growth in the production of domestic food crops was stagnating. During this period, an overvalued exchange rate, declines in the rural-urban terms of trade, an inefficient domestic marketing structure (post-harvest losses are still estimated at between 30 and 40 percent today), and low levels of investment in agriculture, all contributed to make imported foods more generally available, and at a lower relative cost, than domestically produced foods.

However, beginning in late 1976, the Manley Government announced its intention to reduce food imports as a means of cutting requirements for increasingly scarce foreign exchange. The move to limit food imports and the subsequent increase in food prices, along with a reversal of the rural-urban migration as a result of growing levels of urban unemployment and violence in the late 1970s, resulted in increasing levels of domestic food production as of 1978. This pattern of declining food imports, growing food scarcities, increasing prices, and a higher level of domestic food production continued through 1980.

With the defeat of Michael Manley by Edward Seaga in late 1980, and the change of administrations, this policy began to be reversed. One of Seaga's first decisions was to increase food imports, both to relieve some of the food scarcities which had contributed to Manley's defeat and as a tangible expression of the change in political philosophies from Manley's Third World socialism to Seaga's Western-oriented capitalism. As imported foods became available once again, the rate of growth in domestic food production appears to have begun leveling off, although it has not fallen below the previous growth-trend line established since the early 1960s. An experienced Jamaican social scientist, however, anticipates that there will be an actual decrease in domestic food production in 1982 as food imports continue to displace the market for domestically produced foods.

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Thus, it appears that given an improvement in Jamaica's economy in response to Seaga's policies and the increased external assistance which the country is receiving, the prospects for domestic food production may well become increasingly negative. It is likely that Jamaica's policy of liberalized food imports will continue for some time. Seaga has stated that it will take at least three years to put Jamaica's economy back on its feet; at the same time, it is very likely that he sees plentiful food supplies as a means of counteracting domestic unrest, thus allowing the time needed to establish other structural reforms. The very favorable popular reaction to the increased availability of food immediately after he took office is probably a good indicator that a liberal food-import policy is likely to be a continuing factor in the Jamaican agricultural sector.

A further constraint to domestic food production increases is Jamaica's inefficient marketing system. Even though the Manley Government attempted to restructure the domestic marketing system to reduce the higgler's control of this function, it is estimated that, during the period under consideration, 85 percent of domestically produced foods and a significant portion of export commodities were marketed by higgler's.

During the Manley administration, the GOJ's Agricultural Marketing Corporation (AMC) operated buying stations and retail outlets as an alternative to higgler's. The AMC, however, operated with a high overhead cost, heavy Government subsidies, and a high level of inefficiency. Although it was a very expensive system for the Government to run, it only accounted for 12 percent of the agricultural commodities marketed. As a result, the Seaga Government has abandoned the AMC as a domestic marketing structure. Structural marketing inefficiencies, therefore, along with inadequate storage and transportation capabilities, continue to plague Jamaica and limit the options for increasing domestic food availabilities.

B. Ministry of Agriculture Capability Improvements

Evidence related to the self-help measure on improving the Ministry of Agriculture's planning, design, and project implementation capability may be more anecdotal in nature; it is, nevertheless, compelling. As conditions deteriorated in the late 1970s, the emigration of educated and skilled Jamaicans increased dramatically. This emigration encompassed not only skilled persons in the private sector but also many in the public sector, especially as Manley's rhetoric and policies moved increasingly to the left.

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In many cases, the emigration occurred in two stages, with the wife and children leaving first, to be followed, once they were settled and had established contacts, by the father. Although much reduced, this pattern is still being played out to some extent today. As a matter of fact, two Government officials whom we interviewed during the course of the evaluation were in the process of emigrating to the United States. Although the number of people emigrating has decreased since the Seaga Government came to power, there is little evidence as yet of a return immigration movement. As a result, Jamaica has undergone, and is still experiencing the effects of, a severe drain of skilled personnel.

The Government, furthermore, faces an additional problem of retaining in the public sector those skilled individuals who have remained in Jamaica or who are now entering the labor force. This problem is likely to be exacerbated as the economy improves and employment opportunities increase in the private sector. The Government's retention problem is based on the fact that salaries are capped in the public sector and not in the private sector. The disparities between pay scales in the two sectors are much more pronounced than is true in a country such as the United States.

Government service in Jamaica, therefore, tends to be seen as a training ground for the private sector. The typical college graduate who goes to work for the Government tends to leave the public sector after an average of three to five years. Thus, as in many other developing countries, the Government of Jamaica has a very limited number of capable individuals with sufficient and appropriate experience at levels below the top echelons of ministry employees. As a result, the details of planning and implementation tend to suffer.

This assessment, particularly as it relates to the Ministry of Agriculture, would seem to be confirmed by USAID/Jamaica's recent draft, "Project Paper for a Multi-Year PL 480 Title I Program" (December 15, 1981). In discussing the self-help measures to be associated with the proposed project, the Mission prefaces the discussion by stating,

The general philosophy and the objectives for agriculture of the new government are attractive and reasonably well articulated. A deliberated agenda for action, complete with plans and detailed budgets, to achieve the objectives is not yet drawn. A small and growing capacity exists for project development and analysis; however, the overall context into which the projects fit is lacking. Little, if any, analysis of

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major policy issues, or laying out of options and their consequences for decision-makers is taking place. Virtually no long-term planning is being done.

C. Support for Soil Conservation and Appropriate Farming Systems

As detailed in the annual self-help reports, Government of Jamaica efforts at soil conservation and watershed management were begun in 1967, with the assistance of the United Nations Development Program. These initial efforts, lasting until 1975, could be called the first phase of the Soil Conservation Program and involved survey and planning, demonstration, training, and experimentation efforts. A second phase was described as occurring between 1974 and 1978 and involved "a rapid expansion in soil conservation and refinement of planning and implementation." However, no statement of levels achieved during this period could be found in any of the reports. A third program phase, in effect from 1978 to 1983, has as one of its goals the treatment of 13,000 acres per year over the five-year period, for a total of 65,000 acres.

Since the annual self-help reports do not include any indication of actual program performance during any of the years under consideration, we have based our assessment of Jamaica's soil conservation effort on the evaluation of the AID Second Integrated Rural Development Project (IRDP). This project, which effectively began in April-May 1979, is designed as a demonstration activity to provide experience and guidance on means of increasing small farmer production and income on steep hillside watersheds, while practicing good soil conservation techniques. As can be seen, this project's goals are closely reflected in the self-help measure under discussion.

As presented in the Project Paper, soil conservation treatments were conceived of as the project's central activity. Stated goals were 17,700 acres (all cultivated land) to be treated; 4,600 of these to be bench-terraced, primarily by machines; and the bulk of the remaining 13,100 acres to be hillside ditched. Once the project began, however, it was found that hand-built bench terraces would have to be the predominant terracing mode because of the steep slope of the land, the relatively small size of the individual areas terraced, and the inaccessibility of many areas to machines. Hand-built terraces, furthermore, were not only more costly than machine-built ones, but also cost three times as much as the Project Paper estimates (J\$3,880 as compared to J\$1,249).

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As a result, revised project goals were agreed to by AID and the GOJ in March 1981. These new goals were 764 acres of bench terraces, 674 acres of orchard terraces, 4,936 acres of hillside ditches, and 1,500 acres treated by agronomic methods (grass strips and soil mulching). The new goal of 8,486 acres represented a 52-percent decrease from that contained in the original Project Paper. As of September 1981, however, an estimated 2,300 acres had received soil conservation treatment, and it appeared unlikely that even the revised acreage goal would be reached by February 1983, the project termination date.

Given this experience, it can be inferred that previous GOJ soil conservation efforts are also likely to have fallen short of their goals. In addition, these efforts may also have been less effective than anticipated, even on the acreage treated. In fact, this is alluded to by the Project Paper, which points out that past failures in soil conservation efforts in Jamaica and other countries have seldom been due to poor construction but, rather, to poor maintenance.

While the high cost of land treatment is a serious problem, another major problem encountered in this project is low farmer participation rates. While the Project Paper assumed 100-percent participation, the September 1981 review found that a number of farmers were not willing to participate in the land treatment aspects of the project. Although nowhere is a participation figure given, it is described as being low and traceable to the problems of absentee ownership and insecure tenancies (year-to-year or squatters). While estimates of the percentage of farms that fall into these two categories of tenure are said to vary considerably, their number is assessed as "significant" in the project area.

Whatever the percentage, the land-holding pattern in the project area reveals numerous parcels and tracts of unutilized land being held for speculation or investment purposes by absentee landowners. This has been reported to be a major constraint on implementation of coherent land drainage systems and waterways from cooperating farms to and through neglected lands. This pattern has also been a major constraint on successful afforestation on steep hillsides in the project area. From this, it might also be inferred that such tenure patterns have had a restrictive effect on efforts to increase reforested acreage in other parts of the country, as called for in the PL 480 agreements from FY 1973 to FY 1977.

Significantly, the Government of Jamaica has the authority, under the Land Authorities Act of 1951 and the Watershed Protection Act of 1953, to require participation by recalcitrant owners. It also has the authority to assure sufficient security of tenure (or compensatory payment in case of

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eviction) to year-to-year tenants and squatters, thus protecting any investment they might make in soil-conservation treatments. The Government, however, has apparently been reluctant to exercise these powers.

We have inferred, therefore, that if this is the experience in a project which the GOJ itself has recognized as an integral part of its soil conservation program, other GOJ soil conservation efforts are also likely to have fallen short of expectations. This assessment, of course, does not imply that little has been accomplished. On the contrary, it appears that much has been done, in spite of what seems to be a relatively negative environment for such efforts. At the same time, it must be clearly recognized that much more is possible and that the GOJ has apparently not yet reconciled the needs of the small-farmer sector for soil conservation with other perceived policy imperatives.

Similarly, it is apparent that little has been accomplished in the area of developing farming systems to maximize the economic productivity of small farmers. As the September 1981 review of the second IRDP concluded, the mechanism is not yet in place (at the project level) to assure the availability to the small farmer of tested farm practices. In fact, a tested technical package based on project-area soil and climatic conditions has, apparently, yet to be developed. It is interesting to note, furthermore, that none of the annual self-help reports for fiscal years 1978, 1979, and 1980 relates any GOJ activity designed to translate appropriate research results into usable on-farm packages.

The implication we derive from such an absence of reporting is that these activities were either not taking place or, at best, occurring only sporadically. This assessment is supported by the World Bank's January 1982 report on the Jamaican economy. This report states that agricultural research is currently fragmented into five different and poorly coordinated units. The agricultural extension service, furthermore, could be made more efficient if (1) methods and systems are developed to transfer knowledge and information to a larger number of farmers; (2) the field extension agent receives stronger support from subject-matter technicians and other senior extension personnel; and (3) the various extension services are merged.

Given the above, it is apparent that the needs of the small farmers for an appropriate set of improved farming practices, which are capable of being implemented, are not now being met. More to the point, few efforts seem to be under way to remedy this situation.

III. THE OASIS PROJECT

This joint Netherlands-OAS-Israel project is often cited by the Government of Jamaica as one of its "showcase" or "model" projects. Initiated in 1978 by the Manley administration, it has continued to be supported enthusiastically by the Seaga Government. While this discussion is not intended to provide an evaluation of the OASIS project, it will attempt to point out some of its accomplishments and problems as possibly reflective of conditions existing in other, non-AID projects.

OASIS is based on a modified moshev system of cultivation and aims to increase the income of a group of some 100 poor rural farmers by producing a cash crop on communally farmed land, while providing each member household with individual plots of about 5 acres each. The Government of the Netherlands provided financial support for the initial infrastructure requirements during the first 2 years of the project, while the OAS has provided continuing technical assistance by funding the services of two Israeli technicians--an agronomist and an economic planner--at the project site.

Although the project has been in existence for over three years, it is seriously behind in reaching its goals. Most of this problem, unfortunately, can be traced to deficiencies in host-country contracting arrangements and project management.

The construction of all project infrastructure, for example, has been done through subcontracting by the Social Development Commission, the GOJ's implementing agency, with individual contractors. Apparently, however, there are virtually no penalties attached to noncompliance or late compliance with these contracts. Thus, individual contractors feel no pressure to complete their portion of the project within reasonable time limits. A glaring example of this is the OASIS water supply: the well was drilled in early 1980 and, while the contract for construction of the pumphouse and reservoir was let at approximately the same time, these latter were not completed until January 1982. As a result, during this period water had to be obtained by pumping from the nearby river, whose insufficient yearly flow was the reason for the construction of the well system.

Equally significant in creating project delays has been the fact that in a period of a little more than three years, there have been three different firms responsible for overseeing development of the project infrastructure. At least one of these firms was apparently replaced on grounds of inefficiency, and the almost yearly change in supervisory firms has caused implementation discontinuities. One example will suffice: the houses which are to be provided to each of the 100 project

families were built before streets, electricity, and sewer lines were put in. As a result, the cost of providing sewer lines, in particular, has increased significantly because of the need to dig under the houses to make pipe connections. Needless to say, the houses have been unoccupied since they were built some two years ago.

Added to the above is the fact that project costs have skyrocketed, both in response to implementation inefficiencies and to Jamaica's worsening balance of payments and rate of inflation. For example, the above-mentioned houses, which were to have cost each family approximately J\$10,000, have now at least tripled in cost. As a result, it is unlikely that the Government will recover even a small portion of the costs from the project beneficiaries; it is more likely that these will be largely written off, adding to the ultimate cost of the project.

Helping to inflate costs is the fact that OASIS also suffers from the "showcase" syndrome often found in similar projects elsewhere; that is, the scale and quality of the facilities and infrastructure far exceed usual requirements. For example, the OASIS site is located a relatively short distance from a major highway, and is connected to the highway by a paved parish road approximately one and one-half lanes wide. Branching off from this parish road, however, is a one-mile, four-lane highway running through the project site. This road, which is wider than most of the highways linking the OASIS area to Kingston, is being built by a private construction firm which received the contract shortly after the Seaga inauguration. The need for such a large road is highly questionable, especially since the aforementioned parish road loops around the project site and passes near the area where the four-lane road ends. There is, furthermore, no valid engineering reason for the project road exceeding the parish road's capacity by such a large measure.

Finally, project delays and cost overruns have been caused by the difficulty experienced in recruiting and retaining project participants. Some of this may be traceable to the delays in establishing the project infrastructure and facilities, and the consequent lack of appeal to the target group from which the participants are selected: unemployed young rural families. The selection criteria themselves, however, are probably also at fault, since they specify that project participants must be young and have no more than two children. This combination is difficult to attain, either because of a larger number of children, which is not uncommon in Jamaica, or because the males in the targeted age group have already emigrated to the cities or show little interest in farming.

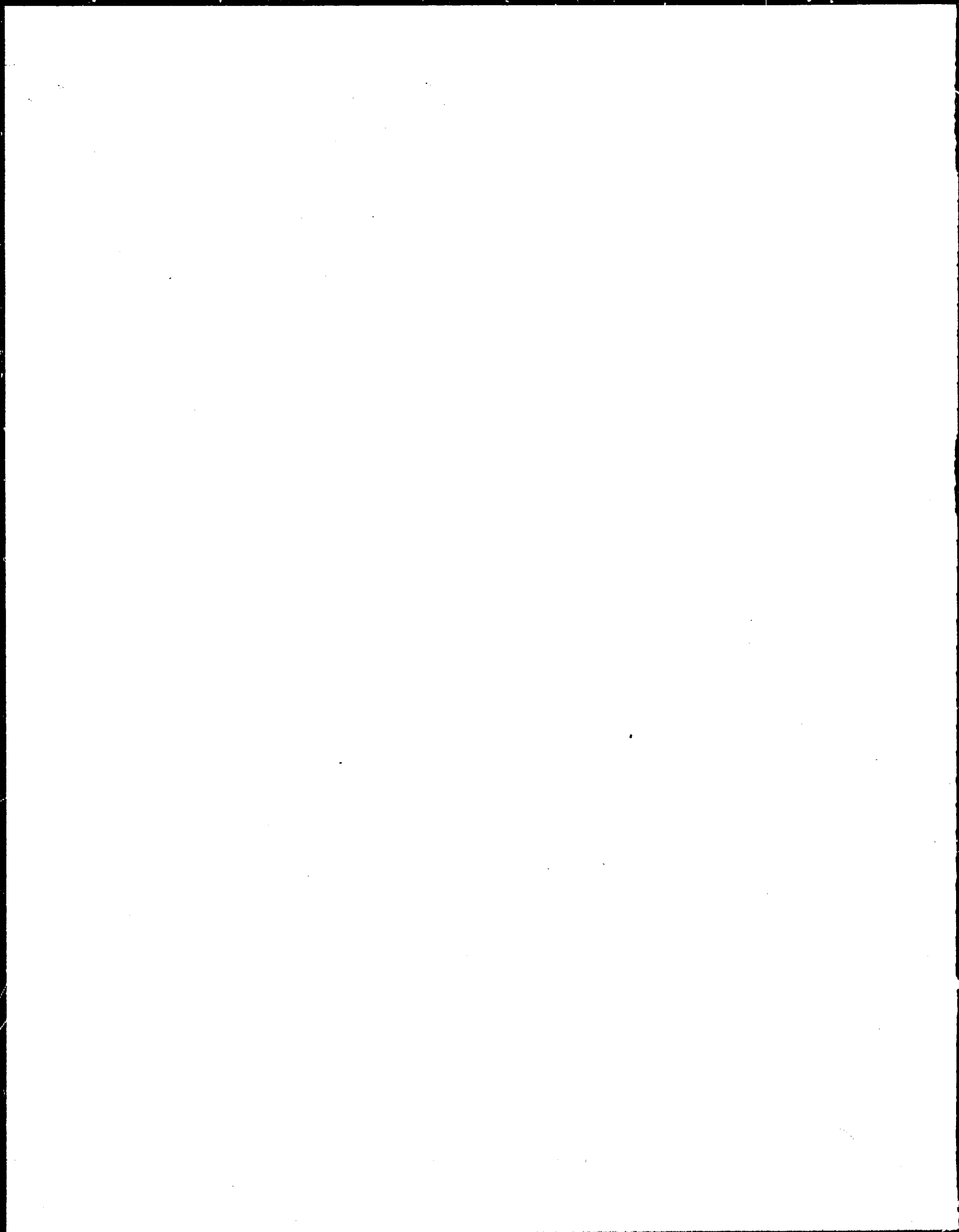
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At present, the project has less than 25 participants, all living away from the project site because of the housing problem mentioned above, and all receiving a monthly stipend of about J\$75. This stipend, which is provided by the Government, is in addition to end-of-harvest profit-sharing. This stipend was found to be necessary as an inducement to participate because not being able to live at the project site means that the participants have limited access to their individual plots. While the need for this stipend is probably valid, at least until OASIS becomes better developed as a project, it adds unplanned costs, especially since the stipend is not treated as an advance against a participant's share of the profit.

Despite these problems, delays, and mistakes, OASIS appears to be a success in terms of production. At present, this project site is supplying almost all of the melons which Jamaica exports to England. In addition, it supplies considerable quantities of vegetables to the local-area and Kingston markets. A measure, moreover, of the project's production efficiency, at least in comparison to other Jamaican agricultural producers, is found in the estimate by project participants that if they were allowed to sell their export produce domestically, they would drive out all other producers. In support of this, they stated that they could supply melons to Kingston markets at approximately J\$.14 each, compared with the current retail price for melons of approximately J\$1 each.

Such production efficiencies, of course, can be directly traced to the almost daily presence of the two expatriate technicians and the close supervision they and the GOJ project managers exercise over the production aspects of the project. What is likely to occur once this close supervision is decreased, or the number of project participants approaches the levels envisioned at the beginning of the project, is a valid but unanswerable question.

The OASIS project, admittedly, is too expensive and probably too specialized in its approach to production to permit replication on any significant scale. In fact, it certainly should not be replicated with anything approaching the infrastructure or constant technical assistance provided at OASIS. This project is significant, however, because it demonstrates the results which are attainable in Jamaica given an appropriate mix of inputs and technical assistance. Such a mix, unfortunately, is probably only possible in limited or special circumstances such as the OASIS project and is unlikely to ever be replicable on a nationwide basis. But, OASIS indicates that given a receptive audience (which Jamaican small farmers appear to be), a carefully developed agricultural technical package based on readily available components, disseminated by knowledgeable individuals, can significantly improve productivity and income in the rural areas.



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